Final
Base Realignment and Closure Act
Cleanup Plan

Fort McClellan,
Calhoun County, Alabama

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List of Acronyms

AAFES	Army Air Force Exchange Services
ACM	Asbestos-Containing Material
ADEM	Alabama Department of Environmental Management
ADPH	Alabama Department of Public Health
ALARNG	Alabama Army National Guard
ARAR	Applicable Relevant and Appropriate Requirements
AST	Aboveground Storage Tank
BCCRHAA	Base Closure Community Redevelopment and Homeless Assistance Act
BCP	BRAC Cleanup Plan
BCT	BRAC Cleanup Team
BRAC	Base Realignment and Closure
CDTF	Chemical Defense Training Facility
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
CHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
CRP	Community Relations Plan
CWM	Chemical Warfare Materiel
^{o}F	Degrees Fahrenheit
DA	Department of the Army
DEH	Department of Engineering and Housing
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DOE	Directorate of Environment
DOJ	Department of Justice
DPDO	Defense Property Disposal Office
DRMO	Defense Reutilization Marketing Office
EBS	Environmental Baseline Survey
ECOP	Environmental Condition of Property
EDC	Economic Development Conveyance
EE/CA	Engineering Evaluation and Cost Analysis
EIS	Environmental Impact Study
EMI	Environmental Management Inc.

List of Acronyms (Continued)

EO	Executive Order
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESE	Environmental Science and Engineering, Inc.
ESMP	Endangered Species Management Plan
ESV	Ecological Screening Value
FMC	Fort McClellan
FOSL	Finding of Suitability to Lease
FOST	Finding of Suitability to Transfer
FUDS	Formerly Used Defense Sites
GIS	Geographic Information System
GSA	Geologic Survey of Alabama
HHS	Department of Health and Human Services
HHSL	Human Health Screening Level
HTRW	Hazardous, Toxic, and Radioactive Waste
HUD	Department of Housing and Urban Development
INRMP	Integrated Natural Resource Management Plan
IRP	Installation Restoration Program
IT	IT Corporation
JPA	Joint Powers Authority
LBP	Lead-Based Paint
LRA	Local Redevelopment Authority
MMBtu/hr	Million Btu Per Hour
MOA	Memorandum of Agreement
MP	Military Police
MSL	Mean Sea Level
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
NHPA	National Historic Preservation Act
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRHP	National Register of Historic Places
NSA	New South Associates, Inc.

List of Acronyms (Continued)

OB/OD	Open Burning/Open Detonation
OE	Ordnance and Explosives
OSHA	Occupational Safety and Health Administration
PA	Preliminary Assessment
PAH	Polynuclear Aromatic Hydrocarbon
PBC	Public Benefit Conveyance
PCB	Polychlorinated Biphenyls
POW	Prisoner of War
ppm	Parts Per Million
QAPP	Quality Assurance Project Plan
RA	Remedial Action
RAB	Restoration Advisory Board
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RI	Remedial Investigation
ROD	Record of Decision
SAIC	Science Applications International Corporation
SARA	Superfund Amendments and Reauthorization Act
SHPO	State Historic Preservation Office
SI	Site Investigation
SINA	Special Interest Natural Areas
SSSL	Site-Specific Screening Level
TERC	Total Environmental Restoration Contract
TRADOC	Training and Doctrine Command
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act
USACE	U.S. Army Corps of Engineers
USATCES	U.S. Army Technical Center for Explosive Safety
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geologic Survey
UST	Underground Storage Tank
UXO	Unexploded Ordnance
WAC	Women's Army Corps
WWTP	Wastewater Treatment Plant

Executive Summary

This Base Realignment and Closure (BRAC) Cleanup plan (BCP) describes the status, management and response strategy, and action items related to Fort McClellan's (FMC) ongoing BRAC environmental restoration and associated compliance programs. These programs support full restoration of the FMC property as necessary to meet the requirements for property disposal and reuse activities following closure of the U.S. Army facility.

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 BRAC environmental restoration programs at FMC are being conducted in accordance with the President's five-part Community Reinvestment Program (Executive Order 12850) to speed the economic recovery at communities where military bases are slated for closure/realignment. The five major elements of the program include:

- Job centered property disposal that puts local economic redevelopment first
- Fast-track cleanup that removes needless delays, while protecting human health and the environment
- Transition coordinators at every base slated for closure
- Easy access to transition and redevelopment help for workers and communities
- Larger economic development planning grants to base closure communities.

The FMC BRAC Cleanup Team (BCT) is focusing on the fast-track cleanup program to expeditiously make property available for transfer to the community integrating the community's reuse needs into the cleanup to allow for safe reuse of the property. The remedial and property transfer activities are being conducted in accordance with the CERCLA process.

This BCP is a dynamic document and was prepared using information available as of July 2001. This BCP was developed by members of the BCT with input from FMC personnel, the Anniston-Calhoun County Fort McClellan Development Joint Powers Authority (JPA) and Restoration Advisory Board (RAB), and the BCT Project Team. The BCP will be updated annually to reflect

changes in the status of the installation and strategies for cleanup and to identify new issues that have developed as a result of continuing investigations.

This BCP addresses the Main Post, Choccolocco Corridor, and two sites (open burning/open detonation [OB/OD] and Outfield area) within Pelham Range. Choccolocco Corridor is addressed because the acreage was leased from the State of Alabama and has been impacted by U.S. Army training operations. The vast majority of Pelham Range is not addressed in this BCP because the U.S. Army currently intends to retain ownership of that training area to license it to the Alabama Army National Guard (ALARNG) for continued training activities.

Status of Disposal and Reuse Process. In 1995 the U.S. Department of Defense (DOD) announced that Fort McClellan would close by October 1999. The BRAC Commission recommended closure of the installation, except for minimum essential land and facilities for a Reserve Component Enclave and essential facilities needed to provide support for the chemical demilitarization operation at Anniston Army Depot.

The U.S. Army identified approximately 18,520 acres at FMC that is excess to military need following realignment (18,929 total Main Post acres, less 409 acres to be maintained for reserve training).

The U.S. Army has initiated the realignment and BRAC parcel disposal process for FMC. The process involves three interrelated activities: development of a Comprehensive Reuse Plan, development of a disposal plan, and the NEPA process. The three-part disposal process is designed to integrate goals of both the U.S. Army and the Local Redevelopment Authority (LRA) in order to provide for the efficient transfer of the FMC mission within the U.S. Army and minimize the impact of closure on the community.

The reuse planning process for the BRAC parcel at FMC is being implemented by the Local Redevelopment Authority, which is referred to as the JPA. In 1998, the JPA was officially recognized as the LRA. The latest version of the Fort McClellan Comprehensive Reuse Plan is dated November 1997. The Community Reuse Plan is conceptual and establishes an overall redevelopment program for the FMC property.

To comply with NEPA, a Draft Disposal and Reuse Environmental Impact Statement (EIS) for the BRAC parcel at FMC was prepared by the U.S. Army Corps of Engineers (USACE), Mobile

District, in December 1997. The Final EIS was submitted in August 1998. The Record of Decision (ROD) was signed on June 25, 1999.

A disposal plan has been developed for FMC by the USACE, Mobile District. The plan fully considers BRAC realignments and schedules, U.S. Army and U.S. Army Materiel Command disposal goals and the reuse planning goals of the community. The plan incorporates U.S. Army BRAC disposal hierarchy requirements established by Public Law 100-526 and the Federal Property and Administration Services Act, the Surplus Property Act, the Federal Property Management Regulations, and the 1994 Defense Authorization Act.

A report of excess property was prepared by the USACE and was published in the *Federal Register* in March 1996. Land and facilities are being retained by FMC to support its remaining missions. Building 2203 has been retained to provide auxiliary support to the Chemical Demilitarization Operation at the Anniston Army Depot. One building complex, Building 215/202 has been retained for use by the FMC Transition Force. The active U.S. Army Reserve will continue operations in Buildings 680 (Decontamination Apparatus Training Facility) and 681(adjacent flammables storage building) and the surrounding property, measuring approximately 16.41 acres. Federal screening to identify facility uses by other DOD entities was completed in March 1996. McKinney Act screening and state and local screening were completed in 1996 by the FMC Local Redevelopment Authority (LRA).

In order that city services could be provided to the property at FMC, the City of Anniston annexed the FMC property from the 15th parallel line west to Highway 21. The annexation was completed on July 15, 1999.

Status of Environmental Restoration Program. Several environmental assessments have been conducted at FMC. FMC initial installation assessments were completed in 1977 and 1984. An enhanced preliminary assessment was completed in 1990. Seventeen sites, consisting of chemical training sites and landfills, were identified and investigated under the Installation Restoration Program (IRP) between 1993 and 1995. The Hot Cell (radiological site) was also investigated under the IRP. All IRP sites on the Main Post have either been appropriately remediated (Hot Cell) or have been transferred to the BRAC program (landfills and chemical sites).

Several programs were in place at the installation prior to closure. These programs address underground storage tanks (UST) and aboveground storage tanks (AST), RCRA, CERCLA,

polychlorinated biphenyls (PCB), asbestos, lead-based paint (LBP), radon, water supply and wastewater, air, medical waste, oil-water separators, pesticides, storm water, Emergency Planning and Community Right-to-Know Act (EPCRA) reporting requirements, spill prevention control and countermeasures, radiological and radioactive waste, chemical warfare materiel (CWM), and unexploded ordnance (UXO).

In 1997, FMC conducted an Environmental Baseline Survey in accordance with CERCLA and CERFA requirements to identify additional sites requiring further action. CERFA designations were assigned to parcels, and non-CERCLA issues were identified, such as LBP on buildings and structures, asbestos, radon, and others. Properties that are currently eligible for transfer and those that require environmental evaluation prior to release for transfer/lease were identified.

Some environmental programs such as PCBs, radon reduction, medical waste, pesticides, wastewater treatment, and water supply were completed, and regulated units closed, prior to or soon after installation closure and transfer. Other programs such as National Pollutant Discharge Elimination System permits, USTs/ASTs, radiological facilities, hazardous wastes, open burning/open detonation (OB/OD), EPCRA, NEPA, natural and cultural resources, and community involvement became the responsibility of the U.S. Army Training and Doctrine Command (TRADOC) transition force after the September 30, 1999, closure date and were placed in "caretaker" status. All environmental programs necessary to maintain compliance which were active when FMC closed are maintained by the transition force.

FMC has maintained various notifications, permits, and registrations within federal, state, and local agencies for facilities within the installation in compliance with environmental regulations. Permits in force at the time of base closure were either terminated by or returned to Alabama Department of Environmental Management (ADEM), modified to reflect changed conditions after closure, or maintained for operations at the installation.

Site investigations and remedial investigations are currently underway under the CERCLA at FMC. Based on investigation results, no further action has been designated for 154 parcels.

Six engineering evaluation and cost analyses (EE/CAs) to investigate the nature and extent of UXO/ordnance and explosives (OE) contamination and to evaluate possible UXO/OE risk reduction and removal action alternatives in accordance with the applicable regulations are currently underway for four UXO areas (M1.01, Alpha, Bravo, and Charlie). Field investigation efforts began in March 2001 and are expected to be completed by April 2002. Two EE/CAs for

UXO areas (M2 Parcel and the Eastern Bypass) slated for accelerated response and release have already been completed. CWM EE/CA was completed in July 2001 and Pelham Range CWM site investigations that began January 2001 will be completed in 2002.

Strategy and Schedule for Environmental Restoration. The BCT has developed a prioritization plan for site cleanup at FMC based on input from the LRA and on assessment of candidate sites according to waste characteristics, potential migration pathways, and potential receptors.

The installation-wide strategy for environmental restoration centers on disposal of properties quickly and efficiently. This includes developing early action strategies, specifically early removal actions, and implementing fast-track environmental cleanup strategies.

Several early actions and interim actions have been completed at FMC in order to reduce or eliminate potential contamination at the installation. These actions include petroleum-contaminated soil removals and tank removals related to UST management, PCB transformer removal, cleanup of the Hot Cell, removal of OE scrap and cleanup of UXO along parts of the Eastern Bypass and M2 Area, and removal of indoor pistol ranges.

The BCT has identified and removed pistol ranges that were previously located in the attics of Buildings 141 and 143 as fast-track sites (parcels 519(4) and 520(4), respectively). The BCT will identify other fast-track sites as BRAC work progresses.

BCT action items and issues associated with the environmental restoration that require further evaluation and implementation include:

- Continuing with site investigations and remedial investigations
- Conducting removal actions at small arms ranges
- Implementing remedies for fill areas as agreed through the fill area EE/CA process
- Implementing ordnance clearance activities as determined through the ordnance EE/CA process
- Implementing chemical warfare materiel (CWM) actions as determined through the CWM EE/CA process.

It is anticipated that the sequencing of work will proceed in accordance with the schedule presented in Chapter 5.0 of this BCP. This schedule may change based on site and remedial investigation findings and early action strategies.

1.0 Introduction and Summary

Fort McClellan (FMC), a U.S. Army facility under the control of the U.S. Army Training and Doctrine Command (TRADOC), was closed under the Base Realignment and Closure (BRAC) program in September 1999. The BRAC environmental restoration program was established in 1989 when the first round of base closures (BRAC 88) was announced.

The BRAC environmental restoration programs at FMC are being conducted in accordance with the President's five-part Community Reinvestment Program (Executive Order 12850) to speed the economic recovery at communities where military bases are slated for closure/realignment. The five major elements of the program include:

- Job centered property disposal that puts local economic redevelopment first
- Fast-track cleanup that removes needless delays, while protecting human health and the environment
- Transition coordinators at every base slated for closure
- Easy access to transition and redevelopment help for workers and communities
- Larger economic development planning grants to base closure communities.

The FMC BRAC Cleanup Team (BCT) is focusing on the fast-track cleanup program to expeditiously make property available for transfer to the community integrating the community's reuse needs into the cleanup to allow for safe reuse of the property. This BRAC Cleanup Plan (BCP) has been completed as part of the fast-track initiative.

The three-fold purpose of this BCP is: (1) to summarize the current status of FMC's environmental restoration and compliance programs, (2) to present strategies for cleanup of the Base and property transfer, while protecting human health and the environment, and (3) to serve as a management tool through the BRAC process for the U.S. Army.

This BCP is a dynamic document and was prepared using information available as of July 2001. This BCP was developed by members of the BRAC Cleanup Team (BCT) with input from FMC personnel, the Local Redevelopment Authority (LRA) and Restoration Advisory Board (RAB), and the BCT Project Team. The BCP will be updated annually to reflect changes in the status of

the installation and strategies for cleanup and to identify new issues that have developed as a result of continuing investigations.

The BCT has implemented various strategies to address environmental issues at the installation. These strategies integrate the activities under the Installation Restoration Program (IRP) with the operation and closure-related compliance programs. In addition to the efforts of the BCT, the LRA has developed a reuse plan for FMC to facilitate transfer of Base properties to prospective users. By working together, the combined strategies of the BCT and LRA will facilitate expeditious restoration and reuse of FMC.

This BCP addresses the Main Post, Choccolocco Corridor, and two sites within Pelham Range (open burning/open detonation [OB/OD] and Outfield area). Choccolocco Corridor is addressed because the acreage was leased from the State of Alabama and has been impacted by U.S. Army training operations. The vast majority of Pelham Range is not addressed in this BCP because the U.S. Army currently intends to retain ownership of that training area to license it to the Alabama Army National Guard (ALARNG) for continued training activities.

This BCP is divided into six chapters. Chapter 1.0 provides an overview of the BCP, describes the objectives of the environmental restoration program, includes a brief history of the installation, and introduces the BCT, RAB, and Project Team.

Chapter 2.0 summarizes the current status of the FMC property disposal process and describes the relationship of the disposal process with other environmental programs. It also outlines the current proposal for reuse of FMC.

Chapter 3.0 summarizes the history and status of the IRP, compliance programs, natural and cultural resource programs, and community relations activities, including information on the RAB. This chapter also includes a description of the environmental condition of FMC properties based on file reviews, the Environmental Baseline Survey (EBS), and investigation results.

Chapter 4.0 describes the installation-wide strategy for environmental restoration, including the strategy for BRAC site investigation (SI) and remediation. This chapter also presents plans for managing environmental compliance programs, natural resource programs, and community relations activities related to the FMC property.

Chapter 5.0 provides master schedules of planned and anticipated activities to be performed throughout the duration of the environmental restoration and compliance programs.

Chapter 6.0 presents technical, operational, and administrative issues associated with FMC and provides a strategy for resolving these issues.

Chapter 7.0 provides a list of primary references utilized in the preparation of the BCP.

The following Appendices are included in this BCP:

- Appendix A presents Fiscal Year Funding Requirements and Costs
- Appendix B presents a summary of Installation Environmental Restoration Documents Summary Tables
- Appendix C presents No Further Action Summaries
- Appendix D presents other materials relevant to the BCP, including an approach to environmental justice issues, a list of buildings and facilities, U.S. Environmental Protection Agency (EPA) and Alabama Department of Environmental Management (ADEM) Community Environmental Response Facilitation Act (CERFA) report conditional concurrence letters, radon survey results, active outgrants and statement of clearance for M2 area.
- Appendix E presents conceptual site model summaries.

1.1 Environmental Response Objectives

The objectives of the BRAC environmental restoration and compliance program at FMC are as follows:

- Protect human health and the environment.
- Evaluate reuse goals set by the community, comply with existing statutes and regulations with the emphasis on meeting the requirements of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA), Resource Conservation and Recovery Act (RCRA), and the National Oil and Hazardous Substance Pollution Contingency Plan (NCP).
- Conduct BRAC program activities in accordance with applicable requirements, including federal, state, local, and U.S. Army guidance and regulations.

- Continue efforts to identify all potentially contaminated areas and incorporate any new sites into the FMC BRAC program.

- Establish priorities for environmental restoration and restoration-related compliance activities so that property disposal and reuse goals can be met.

- Complete the environmental restoration process as soon as practicable for each site, in an order of priority that takes into account environmental concerns and redevelopment plans, and Anniston-Calhoun County Fort McClellan Development Joint Powers Authority (JPA).

- Identify opportunities for selected removal actions to control, eliminate, or reduce risks to manageable levels.

- Continue to consider future land use when characterizing risks associated with releases of hazardous substances, pollutants, contaminants, or hazardous wastes.

- Continue to identify and map the environmental condition of installation property with the intent of identifying areas suitable for transfer by deed.

- Ordnance explosives (OE) conceptual model has been developed.

- Conduct site-specific investigations as necessary to support transfer and lease of property.

- Advise FMC's real estate branch of property that is deemed suitable for transfer, as well as properties that are not suitable for transfer because they are either not properly evaluated or pose an unacceptable human health or environmental risk.

- Develop and implement innovative strategies to speed the remedial process.

- Support a bias for fast-track cleanup rather than conducting studies.

- Perform interim remedial actions and interim removal actions to reduce immediate threats to human health and the environment.

- Establish interim and long-term monitoring plans for remedial actions as appropriate.

- Involve the remedial action contractor early in the cleanup investigation process to ensure a smooth transition between design and implementation of the chosen remedial alternative.

1.2 BCP Purposes, Updates, and Distribution

This BCP presents, in summary fashion, the status of FMC's environmental restoration and compliance programs and the comprehensive strategy for environmental restoration and restoration-related compliance activities. It outlines the response action approach being implemented at the installation in support of property closure, disposal, and reuse. In addition, the BCP defines the status of efforts to resolve technical issues so that continued progress and implementation of scheduled activities can occur. The FMC BCP strategy and schedule are designed to streamline and expedite the necessary response actions associated with BRAC program sites and other areas to facilitate the earliest possible disposal and reuse activities. Remedial action protocols will incorporate future land use in exposure scenarios.

Since the BCP is a "living" document, the information contained herein will be updated annually to reflect the current status of activities at FMC. The information in this BCP assists the LRA and FMC in the expeditious transfer of real property and the eventual reuse of FMC. Revisions will be generated at the discretion of the BCT.

BCP updates are distributed to the BCT, the Project Support Team, the RAB, the information repository, the FMC U.S. Army Garrison Environmental Office, and TRADOC.

1.3 BCT/Project Team

In keeping with the President's five-point plan for expeditious cleanup and transfer of excess military property, the State of Alabama, EPA Region IV, and FMC have committed themselves to the investigation, cleanup, and transfer of FMC using a team-based approach. Recognizing that the three agencies have somewhat different perspectives on the problems commonly encountered during the cleanup and closure of a military base, the Army has followed the example set by EPA early in the BRAC era and has entered into a partnering agreement. The FMC BCT/Project Team was established in December 1995. The core team is the BCT, which includes the BRAC Environmental Coordinator from FMC, a representative of EPA Region IV, and a representative of ADEM. The rest of the Project Team consists of representatives of these agencies, plus the U.S. Army Corps of Engineers (USACE)-Mobile District, U.S. Army Engineering and Support Center Huntsville, JPA, National Guard Bureau (NGB), and ALARNG, the U.S. Army's environmental contractor, IT Corporation (IT) and the U.S. Army OE contractor, Foster Wheeler Environmental Corporation. Combined, the BCT and the support representatives comprise the Partnering Team. Additionally, each agency provides support to the Partnering Team on an as-needed basis. As needed, specialists from each agency lend technical

and programmatic skills to the BCT. Table 1-1 lists the points of contact for the BCT and Project Team. Figure 1-1 illustrates the relationship of the different entities.

Representatives for ADEM, EPA, and FMC have been given authority, responsibility, and accountability to make decisions by consensus of the Partnering Team. Further, the BCT is charged to make time-critical decisions during monthly scheduled team meetings in a real-time manner.

The BCT has developed cleanup and closure strategies for FMC. These strategies are in concert with applicable Army and U.S. Department of Defense (DoD) guidance and incorporate the environmental activities that were ongoing at FMC prior to the decision to close the facility. ADEM and EPA guidance is also followed and is reflected in the cleanup strategies presented in this BCP.

The LRA consults a previously developed Comprehensive Reuse Plan (EDAW, Inc., 1997) to identify the reuse of land and facilities within FMC, but also considers alternate reuse suggestions by potential developers and buyers. The RAB, composed primarily of members of the local community, provides community input to the BCT's environmental restoration efforts at the installation.

1.4 Brief History of Installation

FMC was a U.S. Army training installation located in northeast Alabama, near the city of Anniston, Calhoun County. FMC consisted of three portions of land: the Main Post, Choccolocco Corridor, and the Pelham Range (Figure 1-2). This BCP addresses only the Main Post and Choccolocco Corridor.

The majority of FMC development is in the northwest area of the Main Post. The City of Anniston is located to the south and west of the Main Post; adjoining the Main Post installation to the east are the Choccolocco Mountains of the Talladega National Forest. The Main Post, consisting of 18,929 acres, was purchased by the federal government in March 1917 for the construction of a National Guard camp. Pistol and rifle ranges were established north of the camp, automatic rifle and machine gun ranges were established southwest of the camp, and artillery firing ranges were established southeast of the camp toward the Choccolocco Mountains [New South Associates, Inc., (NSA), 1992]. Camp McClellan expanded throughout the 1920s and 1930s. The advent of World War II in the 1940s brought continued growth for the installation. Most notably, the 22,245 acres of Pelham Range were purchased to the west of the

Main Post in early 1940 for artillery, tank, and heavy mortar firing. Approximately 4,488 additional acres to the east of the Main Post (Choccolocco Corridor) was leased from the state to connect the Main Post to the Talladega National Forest (CH2M Hill, 1994). Historically, Choccolocco Corridor has also been used for various range training activities.

The post-war period initially brought a decline in operations at FMC. The decrease in military spending placed the installation on inactive status. However, in 1950 the installation was reinstated to active status with the eruption of the Korean Conflict. The U.S. Army Chemical School was established at FMC in 1951; the large outdoor training areas allowed for specialized chemical training involving chemical warfare protection, decontamination procedures, flame throwers, and the operation of smoke generators. The Base hospital was renovated to specialize in chest diseases. The first permanent Women's Army Corps (WAC) training facility was established in 1955, although two WAC detachments had been established during the 1940s at the installation. Radiological training was conducted in the mid-1950s at Iron Mountain, Alpha Field, and Bromine Field, all located within Main Post, as well as at Rideout Field on Pelham Range (NSA, 1992).

The mission of the installation was changed in 1966 and it became the U.S. Army School/Training Center. An Advanced Individual Training Infantry Brigade was activated in 1966 to meet requirements for the Vietnam War. The brigade was deactivated in 1970 due to continued force reduction in Vietnam.

In 1973, the Chemical Corps School closed, along with the U.S. Army Combat Developments Command Chemical/Biological Radiological Agency. Five years later, in 1978, the WAC was disestablished and the WAC school closed.

In 1979, the Military Police (MP) School was moved to FMC. In the same year, the U.S. Army Chemical Corps school was re-established, along with a Brigade for Basic Training. U.S. Army Forces Command units, such as D Company, 46th Engineers, were also garrisoned at the post during the 1970s and 1980s.

The mid-1980s brought additional operations to Pelham Range. Pelham Range is located approximately 2 miles northwest of Anniston. This area was used for maneuver training and a wide range of activities from small arms training to tank and artillery training. Pelham Range has also been used for chemical decontamination training and radiological training.

The main missions and support organizations at FMC have been:

- U.S. Army Chemical School
- U.S. Army Military Police School
- Training Center Command
- Training Brigade
- Directorate of Contracting
- Directorate of Community Activities
- Directorate of Resource Management
- Provost Marshal Office Directorate of Community Safety
- Office of the Staff Judge Advocate
- Safety Office
- Equal Employment Opportunity Office
- Office of the Inspector General
- Internal Review and Audit Compliance
- Public Affairs Office
- Directorate of Engineering and Housing
- Directorate of Environment
- Directorate of Information Management
- Directorate of Logistics
- Directorate of Plans, Training, Mobilization, and Security and Reserve Component Support.

Past tenant activities included the following:

- U.S. Army Medical Department Activity
- U.S. Army Dental Activity
- U.S. Department of Defense Polygraph Institute
- Defense Finance and Accounting Services
- Defense Investigative Service
- Marine Corps Administrative Detachment
- Criminal Investigation Division
- 902nd Military Intelligence Group
- Army National Guard
- U.S. Army Reserves
- TRADOC Manpower Activity
- 722nd Explosive Ordnance Detachment
- Army Air Force Exchange Service
- Defense Commissary Agency
- Defense Reutilization and Marketing Office
- U.S. Department of Defense Security Operation Testing Support
- Fort McClellan Elementary School
- Naval Construction Training Center Detachment

- U.S. Army Corps of Engineers (Mobile District)
- U.S. Air Force Disaster Preparedness School.

FMC operations were deactivated and missions completed with the installation closure on September 30, 1999.

1.5 Off-Post Property/Tenants

Certain properties outside the boundaries of FMC are addressed in this BCP. Portions of ranges within Choccolocco Corridor are addressed because the DOD conducted training activities in the area. Portions of range surface danger zones that extend off post at the northern and southeastern property boundaries are also addressed.

Several properties that were once part of the Main Post but have been transferred to the public are not addressed in this BCP and will not be part of the BRAC Cleanup Program. However, such properties are addressed by the U.S. Army Corps of Engineers under the Formerly Used Defense Sites (FUDS) program. Table 1-2 provides a list of properties that were once part of the Main Post and have been transferred by the Army. Table 1-2 also lists several properties adjacent to the Main Post which were never owned by the U.S. Army but were within the surface danger zone of historical ranges; therefore, the properties were potentially impacted by training activities.

1.6 Environmental Setting

1.6.1 Physiography

Pelham Range and all but the easternmost portion of FMC lie within the Valley and Ridge Province of the Appalachian Highlands. The portion of FMC west of Choccolocco Creek lies within the Piedmont Province. Local relief on FMC is in excess of 1,320 feet. The lower elevations (700 feet above mean sea level [msl]) occur along Cane Creek, near Baltzell Gate Road, while the maximum elevations (2,063 feet above msl) occur on Choccolocco Mountain, which traverses the area in a north/south direction, with the steep easterly slopes grading abruptly into Choccolocco Valley. The western slopes are more continuous, with the southern extension maintaining elevations up to 900 feet above msl near the western reservation boundary. The northern extension decreases in elevation in the vicinity of Reilly Heliport. The central portion of FMC is characterized by flat to gently sloping land. The topographic relief at Pelham Range is on the order of 445 feet. The minimum elevation is 500 feet above msl, which occurs at the westerly exit of Cane Creek from the range, and the maximum is 945 feet above

msl, near the southeastern boundary. The northern sector contains broad, rolling topography capped with isolated round knobs rising 75 to 90 feet above the surrounding terrain. A large, relatively flat area called Battle Drill Area is situated near the western boundary (Science Applications International Corporation [SAIC], 1998). A topographic map of FMC is shown on Figure 1-3.

1.6.2 Climate

FMC is situated in a temperate, humid climate. Summers are long and hot, and winters are usually short and mild to moderately cold. The climate is influenced by frontal systems moving from northwest to southeast, and temperatures change rapidly from warm to cool due to the inflow of northern air. The average annual temperature is 63 degrees Fahrenheit (^{o}F). Summer temperatures usually reach 90°F or higher about 70 days per year, but temperatures above 100°F are rare. Freezing temperatures are common in winter but are usually of short duration. The first frost may arrive by late October. Snowfall averages 0.5 to 1 inch. On rare occasions, several inches of snow accumulate from a single storm. At Anniston, the average date of the first 32°F temperature is November 6, and the last is March 30. This provides a growing season of 221 days (Environmental Science and Engineering, Inc. [ESE], 1998).

The average annual rainfall is approximately 53 inches and is well distributed throughout the year. The more intense rains usually occur during the warmer months, and some flooding occurs nearly every year. Drought conditions are rare, though the entire southeastern United States has been experiencing drought conditions for the three years previous to this writing. Approximately 80 percent of the flood-producing storms are of the frontal type and occur in the winter and spring, lasting from 2 to 4 days each. Summer storms are usually thunderstorms with intense precipitation over small areas, and these sometimes result in serious local floods. Occasionally, several wet years or dry years occur in series. Annual rainfall records indicate no characteristic order or pattern.

Winds in the FMC area are seldom strong and frequently blow down the valley from the northeast. However, there is no truly persistent wind direction. Normally, only light breezes or calm prevails, except during passages of cyclonic disturbances, when destructive local wind storms develop, some into tornadoes, with winds of 100 miles per hour or more.

1.6.3 Geology and Hydrogeology

Geology. Calhoun County includes parts of two physiographic provinces, the Piedmont Upland Province and the Valley and Ridge Province. The Piedmont Upland Province occupies the extreme eastern and southeastern portions of the county and is characterized by metamorphosed sedimentary rocks. The generally accepted range in age of these metamorphics is Cambrian to Devonian.

The majority of Calhoun County, including the Main Post of FMC, lies within the Appalachian fold-and-thrust structural belt (Valley and Ridge Province) where southeastward-dipping thrust faults with associated minor folding are the predominant structural features. The fold-and-thrust belt consists of Paleozoic sedimentary rocks that have been asymmetrically folded and thrust-faulted, with major structures and faults striking in a northeast-southwest direction.

Northwestward transport of the Paleozoic rock sequence along the thrust faults has resulted in the imbricate stacking of large slabs of rock referred to as thrust sheets. Within an individual thrust sheet, smaller faults may splay off the larger thrust fault, resulting in imbricate stacking of rock units within an individual thrust sheet (Osborne and Szabo, 1984). Geologic contacts in this region generally strike parallel to the faults, and repetition of lithologic units is common in vertical sequences. Geologic formations within the Valley and Ridge Province portion of Calhoun County have been mapped by Warman and Causey (1962), Osborne and Szabo (1984), and Moser and DeJarnette (1992) and vary in age from Lower Cambrian to Pennsylvanian.

The basal unit of the sedimentary sequence in Calhoun County is the Cambrian Chilhowee Group. The Chilhowee Group consists of the Cochran, Nichols, Wilson Ridge, and Weisner Formations (Osborne and Szabo, 1984) but in Calhoun County is either undifferentiated or divided into the Cochran and Nichols Formations and an upper, undifferentiated Wilson Ridge and Weisner Formation. The Cochran is composed of poorly sorted arkosic sandstone and conglomerate with interbeds of greenish-gray siltstone and mudstone. Massive to laminated, greenish-gray and black mudstone makes up the Nichols Formation, with thin interbeds of siltstone and very fine-grained sandstone (Szabo et al., 1988). These two formations are mapped only in the eastern part of the county.

The Wilson Ridge and Weisner Formations are undifferentiated in Calhoun County and consist of both coarse-grained and fine-grained clastics. The undifferentiated unit consists of coarse-grained and fine-grained units. The coarse-grained facies appears to dominate the unit and

consists primarily of coarse-grained, vitreous quartzite and friable, fine- to coarse-grained, orthoquartzitic sandstone, both of which locally contain conglomerate. The fine-grained facies consists of sandy and micaceous shale and silty, micaceous mudstone, which are locally interbedded with the coarse clastic rocks. The abundance of orthoquartzitic sandstone and quartzite suggests that most of the Chilhowee Group bedrock in the vicinity of FMC belongs to the Weisner Formation (Osborne and Szabo, 1984).

The Cambrian Shady Dolomite overlies the Weisner Formation northeast, east, and southwest of the Main Post and consists of interlayered bluish-gray or pale yellowish-gray, sandy dolomitic limestone and siliceous dolomite with coarsely crystalline, porous chert (Osborne et al., 1989). A variegated shale and clayey silt have been included within the lower part of the Shady Dolomite. Material similar to this lower shale unit was noted in core holes drilled by the Alabama Geologic Survey on FMC (Osborne and Szabo, 1984). The character of the Shady Dolomite in the FMC vicinity and the true assignment of the shale at this stratigraphic interval are still uncertain (Osborne, 1999).

The Rome Formation overlies the Shady Dolomite and locally occurs to the northwest and southwest of the Main Post as mapped by Warman and Causey (1962) and Osborne and Szabo (1984). The Rome Formation consists of variegated, thinly interbedded grayish-red-purple mudstone, shale, siltstone, and greenish-red and light gray sandstone, with locally occurring limestone and dolomite. The Conasauga Formation overlies the Rome Formation and occurs along anticlinal axes in the northeastern portion of Pelham Range (Warman and Causey, 1962; Osborne and Szabo, 1984) and the northern portion of the Main Post (Osborne et al. 1997). The Conasauga Formation is composed of dark-gray, finely to coarsely crystalline, medium- to thick-bedded dolomite with minor shale and chert (Osborne et al., 1989).

Overlying the Conasauga Formation is the Knox Group, which is composed of the Copper Ridge and Chepultepec dolomites of Cambro-Ordovician age. The Knox Group is undifferentiated in Calhoun County and consists of light medium gray, fine to medium crystalline, variably bedded to laminated, siliceous dolomite and dolomitic limestone that weather to a chert residuum (Osborne and Szabo, 1984). The Knox Group underlies a large portion of the Pelham Range area.

The Ordovician Newala and Little Oak Limestones overlie the Knox Group. The Newala Limestone consists of light to dark gray, micritic, thick-bedded limestone with minor dolomite. The Little Oak Limestone consists of dark gray, medium- to thick-bedded, fossiliferous,

argillaceous to silty limestone with chert nodules. These limestone units are mapped together as undifferentiated at FMC and in other parts of Calhoun County. The Athens Shale overlies the Ordovician limestone units. The Athens Shale consists of dark-gray to black shale and graptolitic shale with localized interbedded dark gray limestone (Osborne et al., 1989). These units occur within an eroded "window" in the uppermost structural thrust sheet at FMC and underlie much of the developed area of the Main Post.

Other Ordovician-aged bedrock units mapped in Calhoun County include the Greensport Formation, Colvin Mountain Sandstone, and Sequatchie Formation. These units consist of various siltstones, sandstones, shales, dolomites and limestones and are mapped as one, undifferentiated unit in some areas of Calhoun County. The only Silurian-age sedimentary formation mapped in Calhoun County is the Red Mountain Formation. This unit consists of interbedded red sandstone, siltstone, and shale with greenish-gray to red silty and sandy limestone.

The Devonian Frog Mountain Sandstone consists of sandstone and quartzitic sandstone with shale interbeds, dolomudstone, and glauconitic limestone (Szabo et al., 1988). This unit locally occurs in the western portion of Pelham Range.

The Mississippian Fort Payne Chert and the Maury Formation overlie the Frog Mountain Sandstone and are composed of dark- to light-gray limestone with abundant chert nodules and greenish-gray to grayish-red phosphatic shale, with increasing amounts of calcareous chert toward the upper portion of the formation (Osborne and Szabo, 1984). These units occur in the northwestern portion of Pelham Range. Overlying the Fort Payne Chert is the Floyd Shale, also of Mississippian Age, which consists of thin-bedded, fissile, brown to black shale with thin intercalated limestone layers and interbedded sandstone. Osborne and Szabo (1984) reassigned the Floyd Shale, which was mapped by Warman and Causey (1962) on the Main Post of FMC, to the Ordovician Athens Shale on the basis of fossil data.

The Jacksonville Thrust Fault is the most significant structural geologic feature in the vicinity of FMC, both for its role in determining the stratigraphic relationships in the area and for its contribution to regional water supplies. The trace of the fault extends northeastward for approximately 39 miles between Bynum, Alabama, and Piedmont, Alabama. The fault is interpreted as a major splay of the Pell City Fault (Osborne and Szabo, 1984). The Ordovician sequence comprising the Eden thrust sheet is exposed at FMC through an eroded "window," or "fenster," in the overlying thrust sheet. Rocks within the window display complex folding, with

the folds being overturned and tight to isoclinal. The carbonates and shales locally exhibit well-developed cleavage (Osborne and Szabo, 1984). The FMC window is framed on the northwest by the Rome Formation, north by the Conasauga Formation, northeast, east, and southwest by the Shady Dolomite, and southeast and southwest by the Chilhowee Group (Osborne et al., 1997). The geology of FMC is shown on Figure 1-4.

Hydrogeology. The hydrogeology of Calhoun County has been investigated by the Geologic Survey of Alabama (GSA) (Moser and DeJarnette, 1992) and the U.S. Geological Survey (USGS) in cooperation with the GSA (Warman et al., 1962) and ADEM (Planert and Pritchette, 1989). Groundwater in the vicinity of FMC occurs in residuum derived from bedrock decomposition, within fractured bedrock, along fault zones, and from the development of karst frameworks. Groundwater flow may be estimated to be toward major surface water features. However, because of the impacts of differential weathering and variable fracturing and the potential for conduit flow development, the use of surface topography as an indicator of groundwater flow direction must be exercised with caution in the area. Areas with well-developed residuum horizons may subtly reflect the surface topography, but the groundwater flow direction also may exhibit the influence of pre-existing structural fabrics or the presence of perched water horizons on unweathered ledges or impermeable clay lenses. Because of the various geologic factors described above, the extension of groundwater elevation contours over distances on the size and scale of FMC is not practical without closely spaced control points (SAIC, 1998).

Precipitation and subsequent infiltration provide recharge to the groundwater flow system in the region. The main recharge areas for the aquifers in Calhoun County are located in the valleys. The ridges generally consist of sandstones, quartzite, and slate, which are resistant to weathering, relatively unaffected by faulting, and therefore relatively impermeable. The ridges have steep slopes and thin to no soil cover, which enhances runoff to the edges of the valleys (Planert and Pritchette, 1989).

The thrust fault zones typical of the county form large storage reservoirs for groundwater. Points of discharge occur as springs, effluent streams, and lakes. Coldwater Spring is the largest spring in the State of Alabama, with a discharge of approximately 32 million gallons per day. This spring is the main source of water for the Anniston Water Department, from which FMC buys its water. The spring is located approximately 5 miles southwest of Anniston and discharges from the brecciated zone of the Jacksonville Fault (Warman et al., 1962).

Shallow groundwater on FMC occurs principally in the residuum developed from Cambrian sedimentary and carbonate bedrock units of the Weisner Formation and the Shady Dolomite and locally in lower Ordovician carbonates. The residuum may yield adequate groundwater for domestic and livestock needs but may go dry during prolonged dry weather. Groundwater within the residuum serves as a recharge reservoir for the underlying bedrock aquifers. Bedrock permeability is locally enhanced by fracture zones associated with thrust faults and by the development of solution (karst) features.

Two major aquifers were identified by Planert and Pritchette (1989), the Knox-Shady and Tuscumbia-Fort Payne aquifers. The continuity of the aquifers has been disrupted by the complex geologic structure of the region, such that each major aquifer occurs repeatedly in different areas. The Knox-Shady aquifer group occurs over most of Calhoun County and is the main source of groundwater in the county. It consists of the Cambrian and Ordovician aged quartzite and carbonates. The Conasauga Dolomite is the most utilized unit of the Knox-Shady aquifer, with twice as many wells drilled as any other unit (Moser and DeJarnette, 1992).

The Tuscumbia-Fort Payne aquifer occurs in the extreme northwestern portion of the county. This aquifer consists of Mississippian age carbonates and shales. Because of its limited outcrops in the recharge area and the rugged terrain of the outcrop area, the Tuscumbia-Fort Payne aquifer is not considered a major groundwater supply in Calhoun County (Moser and DeJarnette 1992). However, it is an important source of groundwater in counties to the west (Planert and Pritchette, 1989). The potentiometric surface map of FMC Main Post for March 2000 is shown on Figure 1-5.

Surface Hydrology. The Choccolocco Mountains, located in the eastern portion of the Post, form a major surface water divide. East of this divide, the reservation consists of a relatively narrow strip called Choccolocco Corridor, which extends approximately 3.5 to 4 miles from the mountains across the floodplain of Choccolocco Creek, to the base of Rattlesnake Mountain. Choccolocco Creek and its tributaries drain this portion of FMC and flow southward to the Coosa River.

The entire central portion of FMC west of the drainage divide is drained by three major creeks and their tributaries. South Branch receives runoff from the south-central portion, then joins Cane Creek before leaving the reservation on the western boundary. Cane Creek receives surface runoff from the central section. The north-central section of the Post is drained by Cave Creek, which leaves the Post on the northwestern boundary. Other surface water features on the

Main Post include Lake Yahou (13.5 acres), Reilly Lake (8.5 acres), Cappington Ridge (0.3 acres), Duck Pond (0.5 acre), and an aqueduct. Surface drainage is collected in small, independent networks that drain areas varying from 20 to 60 acres (SAIC, 1993).

The Cane/Cave Creek watershed is among the six major watersheds occurring within Calhoun County. Cane Creek, with its tributaries (Remount, South Branch, and Ingram Creeks), originates on the FMC Reservation. Cave Creek, which occurs as a separate body while on installation lands, also originates on Post. The on-Post drainage area of this system covers approximately 20 square miles. Dothard Creek has headwaters originating both on and off the installation. These creek systems originate in the Choccolocco Mountains on the eastern boundary of the installation and flow west through the main cantonment. They are fed by springs originating from underlying limestone strata. Cane Creek also passes through the entire length of Pelham Range, but its size and volume are greatly increased by the time it reaches this land area, the Choccolocco Mountains, passing in a northerly to southerly direction through the Choccolocco Corridor.

Cane Creek, which flows westward across the center of Pelham Range, and its tributaries drain almost all of Pelham Range. Drainage entering the range from the south originates in the Anniston Army Depot, which joins Pelham Range to the south. One drainage way located in the southwestern corner flows in a northerly direction and empties into a large topographic low (Battle Drill Area). Cane Creek traverses this low some 800 yards to the north, and all water collected in the low eventually drains into Cane Creek. Other surface water features in Pelham Range include Lake Contreas (27 acres), Cane Creek Lake (7.5 acres), Willet Springs (0.8 acres), and Blue Hole (0.2 acres). All drainage from FMC and Pelham Range ultimately empties into the Coosa River. Floodplains up to 2,500 feet wide traverse this sector and slope toward the center of the range. The wide floodplains are absent in the southern portion of the range.

The 100-year floodplain for stream drainage on FMC includes Sanitary Landfills 2, 3, and 4; the Alabama Military Academy facilities; and a portion of the golf course area. Other facilities within the 100-year floodplain include the training aids and temporary MP academic facilities; transportation motor pool yard; industrial storage areas along Baltzell Gate Road; Directorate of Industrial Operations and Supply warehouses; Post Engineer facilities; facilities along Seventh Avenue, 21st Street, and 22nd Street; and the main training ranges within the Ingram Creek system.

2.0 Property Disposal and Community Reuse Plan

This chapter of the BCP contains information regarding the status of FMC's disposal planning process (Section 2.1) and its relationship to the environmental cleanup programs (Section 2.2). The strategy for real property transfer and transfer progress at FMC are presented in Section 2.3.

2.1 Status of Disposal Planning Process

In 1995 the DOD announced that FMC would close by October 1999. The BRAC Commission recommended closure of the installation, except for minimum essential land and facilities for a Reserve Component Enclave and essential facilities needed to provide support for the chemical demilitarization operation at Anniston Army Depot.

Pursuant to Public Law 101-510 as amended and the BRAC Act of 1990, the U.S. Army identified approximately 18,520 acres at FMC that is excess to military needs following realignment (18,929 total Main Post acres less 409 acres to be maintained for reserve training).

The U.S. Army has initiated the realignment and BRAC parcel disposal process for FMC. The process involves three interrelated activities: development of a Comprehensive Reuse Plan, development of a disposal plan, and the National Environmental Policy Act (NEPA) process. The three-part disposal process is designed to integrate goals of both the U.S. Army and the City of Anniston in order to provide for the efficient transfer of the FMC mission within the U.S. Army and minimize the impact of closure on the community. The status of each of these activities is outlined below.

2.1.1 Comprehensive Reuse Plan

The reuse planning process for the BRAC parcel at FMC is being implemented by the LRA, which is referred to as the JPA.

As of this writing, the LRA consists of local officials (see Table 2-1) with the mission of coordinating development and implementation of a Reuse Plan for FMC. The latest version of the Fort McClellan Comprehensive Reuse Plan is dated November 1997 (FMC 1997). The JPA has revised the Reuse Map to reflect the transfers that have occurred since the Reuse Plan was adopted.

The text of the Reuse Plan is outdated. However until a new reuse plan is submitted and approved, all cleanup decisions will be made utilizing the approved November 1997

Comprehensive Reuse Plan. Uses of certain parcels have not changed. In general, the basic objectives and types of uses are still relevant.

Reuse objectives identified by the JPA include:

- Provide a unified, logistical master plan
- Replace military and civilian jobs
- Enhance economic opportunities for Calhoun County and the surrounding region
- Recommend uses consistent with market demand
- Provide a logical strategy for marketing
- Balance public and private uses
- Emphasize sustainable development and recruit environment-friendly employers
- Maintain the natural beauty of FMC
- Retain the Post's historic core
- Ensure interim leasing is consistent with the long-term plan.

The key physical features of the Land Use Plan are:

- A mix of uses, with a majority of the living areas south of Cane Creek and the majority of the working areas north of Cane Creek.

- The creation of a series of living, working, learning, and shopping neighborhoods that create a mixed-use community.

- An open space network that links the various neighborhoods and provides a valuable public amenity.

- A corridor cleared of unexploded ordnance (UXO) along which the Eastern Bypass is built upon.

- A four-lane parkway following the existing road network that joins the Eastern Bypass.

- The creation of a separate truck route, using an existing road to line the proposed spine road at the Rail Industrial Park with the Eastern Bypass south of Yahoo Lake.

- A nature reserve in the Choccolocco Mountains.

2.1.2 Disposal Plan/Process

A disposal plan has been developed for FMC by the USACE, Mobile District. The plan fully considers BRAC realignments and schedules, U.S. Army and U.S. Army Material Command disposal goals, and the reuse planning goals of the community. The plan incorporates U.S. Army BRAC disposal hierarchy requirements established by Public Law 100-526 and the Federal

Property and Administration Services Act, the Surplus Property Act, the Federal Property Management Regulations, and the 1994 Defense Authorization Act.

The method of disposal was determined, in part, by the following three-step screening procedure that assesses the demand for the facilities by the DOD, other federal agencies, homeless assistance providers, and state and local agencies/organizations:

DOD and Federal Agency Screening. The first screening offers the property to other DOD and federal agencies. The DOD or another federal agency indicating an initial interest must follow up with a firm proposal for use of the property. Under the 1994 Defense Authorization Act, the DOD and federal screening is completed within six months after the date of approval of BRAC recommendation.

LRA Screening. Pursuant to the Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (BCCRHAA), which amended the Defense Base Closure and Realignment Act of 1990, property that is surplus to the federal government's needs is to be screened by the Fort McClellan LRA and its predecessor, through the solicitation of notices of interest from the state and local governments, representatives of the homeless, and other interested parties.

Formal State and Local Screening. The formal state and local screening process required by the Federal Property Management Act is managed by the U.S. Army Corps of Engineers. The formal state and local screening process does not commence until the Department of Housing and Urban Development (HUD) approves the LRA's final adopted redevelopment plan. HUD approval includes being satisfied that the plan meets the provisions of the BCCRHAA on a community-wide basis for homeless assistance.

The process leading to the transfer of excess U.S. Army property also includes certification that properties are suitable for disposal and that environmental cleanup is conducted to a level that is protective of human health and the environment, with potential special risk management considerations given to incorporate future reuses of the property. The BRAC review process determines which properties qualify for transfer as is and which properties require further action before transfer, based on the environmental condition of the property. Investigative and cleanup efforts are conducted for properties requiring action prior to transfer, reflecting priorities of the LRA Comprehensive Reuse Plan. Areas on base with high transfer priority were investigated first, regardless of the extent or severity of contamination. The LRA used information from the

EBS to determine which areas to target for development (ESE, 1998). Areas that are potentially heavily contaminated were placed low on the priority list. The LRA and FMC anticipate that the approach of prioritizing sites will keep the property transfer process moving and allow the most effective use of limited assessment and remediation resources.

2.1.3 National Environmental Policy Act (NEPA) Documentation

To comply with NEPA, a Draft Disposal and Reuse Environmental Impact Statement (EIS) for the BRAC parcel at FMC was prepared by the USACE , Mobile District in December 1997. The Final EIS was submitted in August 1998. The Record of Decision (ROD) was signed on June 25, 1999.

The EIS evaluated several disposal and reuse alternatives, in accordance with the Department of the Army (DA) policy on the preparation of U.S. Army disposal and reuse documents. This policy establishes a broad framework for the formulation of "unencumbered" and "encumbered" disposal alternatives and reuse of installation property by other (non-U.S. Army) parties. Disposal alternatives considered in the EIS are as follows:

Caretaker Alternative. Immediately following closure on September 30, 1999, the U.S Army placed the existing facilities and support equipment and systems at FMC in caretaker status for maintenance until transfer or conveyance. Under caretaker status, the Army conducts minimal maintenance procedures as required to preserve and protect those facilities and items of equipment to the extent allowed by regulation and available funding.

Encumbered Disposal Alternative. Encumbered disposal alternative involves an Army imposed or legal constraint to be imposed on future owners as a condition of disposal and reuse of the property. Encumbrances maintain legal responsibilities and sustain environmental values, which may restrict future uses. Encumbrances applicable to FMC include wetlands, environmental remediation, asbestos and lead-based paint (LBP), unexploded ordnance, threatened and endangered species, archaeological/historical resources, and utilities interdependencies.

Unencumbered Disposal Alternative. Either the U.S Army would dispose of property with no imposed encumbrances, or the Army would remove the causes for the encumbrances prior to disposal, thereby allowing certification that the property is available for transfer without encumbrances. Unencumbered disposal at FMC was considered not reasonable, based upon anticipated adverse environmental impacts and the interests of the Army.

Three reuse scenarios based upon the FMC Comprehensive Community Reuse Plan are discussed and evaluated in the Environmental Impact Study (EIS). Medium high intensity, medium low, and medium alternatives represent the full range of reasonably foreseeable redevelopment alternatives at FMC. The reuse alternatives include redevelopment concepts for 1) the main cantonment area and adjoining developed areas that have relatively few environmental restrictions and high reuse potential and 2) the currently undeveloped training areas of FMC, which may have reuse limitations associated with unexploded ordnance that may be present at some locations.

2.1.4 Disposal/Reuse Progress

The disposal process at FMC is underway, following Disposal Plan guidelines and in a manner consistent with currently proposed community reuse goals. Progress to date is as follows:

- Base realignment actions at FMC began immediately after the BRAC 95 decision and were completed on September 30, 1999.

- A report of excess property was prepared by the USACE and was published in the ***Federal Register*** in March 1996.

- Land and facilities are being retained by FMC to support its remaining missions. The facilities include:

  - ***Chemical Demilitarization Operation.*** Building 2203 has been retained to provide auxiliary support to the Chemical Demilitarization Operation at the Anniston Army Depot.

  - ***Transition Force Operations.*** One building complex, Building 215/202, has been retained for use by the FMC Transition Force.

  - ***U.S. Army Reserve, 81st Command.*** The Active U.S. Army Reserve will continue operations in Buildings 680 (Decontamination Apparatus Training Facility) and 681(adjacent flammables storage building) and the surrounding property, measuring approximately 16.41 acres.

- Federal screening to identify facility uses by other DOD entities was completed in March 1996.

- McKinney Act screening was completed in December 1996 by the FMC LRA.

- State and local screening was completed in 1996 by FMC LRA.

- On July 15, 1999, the City of Anniston annexed the FMC property, in order that city services could be provided to the property at FMC.

2.2 Relationship to Environmental Programs

Disposal and reuse activities at FMC are closely linked to environmental investigation, restoration, and compliance activities for two basic reasons:

- Federal property transfer to non-federal parties is governed by CERCLA Section 120(h).
- Residual contamination may remain on certain properties after remedial actions have been completed or put in place, thereby restricting or placing encumbrances on the future use of those properties.

CERCLA Section 120(h)(3)(B)(I) requires that deeds for federal transfer of previously contaminated property contain a covenant that all remedial actions necessary to protect human health and the environment have been taken. The 1992 CERFA amendment to CERCLA provided clarification to the phrase "has been taken." This clarification states that the remedial action has been taken if the construction and installation of an approved remedial design (RD) has been completed and the remedy has been demonstrated to the EPA 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 released or disposed. Thus, remedial and/or removal response action must be selected and implemented for such properties before the transfer to private parties can occur, unless the Army pursues the covenant deferral process in CERCLA 120(h)(3)(c).

The requirements for complying with CERCLA Section 120(h) and the possibility of residual contamination are factored into the property disposal and reuse plan at FMC. The FMC strategy and schedule are designed to remediate sites in a manner consistent with reuse goals but are also designed to streamline and expedite the necessary response actions to facilitate the earliest possible disposal and reuse activities. The environmental condition of property map (Figure 3-1) has been developed using data developed during the base-wide EBS and subsequent SIs. This environmental condition of the property map allows the reader to visualize the relationship between proposed disposal/reuse parcels and the environmental condition of the property (contaminated, potentially contaminated, no suspected contamination).

The environmental condition of the installation properties and the implementation of environmental restoration programs have a critical impact on the transfer of properties. The

availability of Base properties for disposal and reuse is dependent on the environmental condition of the property and the status of remedial actions. The relationship between environmental cleanup efforts and the property transfer process as developed by the BCT is shown on Figure 2-1. The BCT will continue to update and refine the environmental condition of property and property suitable for transfer maps for FMC as data become available and as site restorations are completed.

2.3 Property Transfer

The various property transfer methods being used or considered in the disposal process at FMC are described in this section. These transfer methods were identified from U.S. Army BRAC disposal protocols established by Public Law 100-526, the Federal Property Management Regulations, and the 1994 Defense Authorization Act. The status of each of the proposed transfer methods is identified. Transfer methods that are not currently being considered but which could be used in future disposal planning actions at the installation have also been identified.

2.3.1 Federal-to-Federal Transfer of Property

Fed-to-Fed transfer is when property is transferred to another federal agency. Screening of the FMC BRAC parcel for use by other federal agencies was completed in March 1996. There are 7,683.6 acres of land identified to be reused by federal agencies (Figure 2-2), as follows:

- Approximately 64.27 acres of land with 18 facilities was transferred to the Department of Justice (DOJ), Center for Domestic Preparedness. The buildings transferred to the DOJ include a portion of the Lodging Complex consisting of the 900-series buildings (Buildings 942 through 947), part of the Training and Facilities Area (Facilities 303, 303F, 304, and 1081), and the Chemical Defense Training Facility (Facilities 4479 through 4485 and 4487). An Environmental Condition of Property (ECOP) Report was signed on February 21, 2001. Transfer of property was completed on July 16, 2001.

- Approximately 19.33 acres of land with five facilities (Facilities 292, 293, 294, 294F, and 297) will be transferred to the Department of Health and Human Services for use in support of the health training services component of the Department of Justice's Center for Domestic Preparedness. An Environmental Condition of Property Report was signed on November 29, 2000. Transfer of property is expected to be completed by March 2002.

- Planned future Federal-to-Federal transfers include approximately 7,600 acres identified outside the cantonment area for a natural wildlife refuge. The U.S. Fish and Wildlife Service (USFWS) will hold title to the property and will control certain management programs. Deer and turkey upland game management

programs will be administered by the State of Alabama. Figure 2-3 shows the property allocated for the U.S. Fish and Wildlife acquisition and management areas.

Table 2-3 presents a property transfer summary.

2.3.2 Licensing

On October 1, 1999, an area covering approximately 291 acres within the Main Post was licensed to the ALARNG for the continuation of training operations. The area licensed to the ALARNG is located within the cantonment area of the Main Post with the Military Operations in Urban Terrain site located to the east of the cantonment area (Figure 2-4). Title to property within the ALARNG enclave is retained by the DOD, with the property licensed to the National Guard. All of Pelham Range is to remain the property of the federal government and will be licensed to the ALARNG for use.

On November 12, 1999, an additional 56.22 acres with 25 facilities was temporarily licensed to the ALARNG, including facilities at the Ammunition Supply Point and the Egbert Hill facilities. The facilities are used as temporary ammunition storage area and emergency operation center, until the completion of construction of permanent facilities. Table 2-3 presents a summary of the licensed property.

2.3.3 Public Benefit Conveyance (PBC)

State or local government entities may obtain property at no cost or at less than fair market value when sponsored by a federal agency for uses that would benefit the public (e.g., health and education, parks and recreation, wildlife conservation, or public health). At the time of this writing, three transfers of property under the PBC (Table 2-2 and Figure 2-5) have been completed, as follows:

- Approximately 0.49 acres of land with one building, Building 69, were transferred to the City of Anniston for continued use as a fire station. The Finding of Suitability to Transfer (FOST) Document was signed on October 27, 2000. The deed was signed on December 29, 2000.

- Approximately 7.08 acres of land with two buildings and four structures comprising the Waste Water Treatment Plant and Waste Water Collection System were transferred to the City of Anniston Water Works and Sewer Board for operation of the wastewater treatment system. The Finding of Suitability to Transfer Document was signed on December 7, 1999. The deed was signed on March 28, 2000.

- Approximately 271.65 acres of land were transferred to the Alabama Department of Transportation for construction of the Eastern Bypass Tract No. 1. The Finding of Suitability to Transfer Document was signed on April 20, 2001. The deed was signed on August 2, 2001.

- Approximately 0.96 acres of land with two facilities were transferred directly to the FMC Credit Union, not under PBC. The Finding of Suitability to Transfer Document was signed on April 14, 2000. The deed was signed on September 19, 2000.

The Eastern Bypass Tracts No. 2 and 3 properties are planned for future transfers under this federal transfer mechanism. Open space (recreational use), education facilities, and several road projects are proposed in the LRA Comprehensive Reuse Plan. Major roads are proposed to connect the Eastern-Bypass to the proposed industrial park in the northern Main Post and to provide an additional truck route entering the southeastern Main Post. An engineering evaluation/cost analysis (EE/CA) for the Eastern Bypass is complete and the removal action is underway at the time of this writing.

2.3.4 No-Cost Economic Development Conveyance (EDC)

A no-cost EDC is a new mechanism for transferring properties to help spur economic development within the community of the closing base and help with job creation in the local community. To qualify for this conveyance, an LRA must submit a request to the DA describing its proposed economic development and job creation program.

FMC anticipates that the majority of property within the cantonment area and much of the Remediation Reserve will be transferred using this mechanism. Under a no-cost EDC, the property is transferred to the LRA, and the LRA decides the party that will receive the property and the appropriate payment. Figure 2-6 presents properties transferred under the no-cost EDC. At the time of this writing, the following properties have been transferred under the no-cost EDC method:

- 1,223.32 acres of land with 416 facilities summarized in Table 2-2 and shown on Figure 2-6 (E1 Transfers 1 and 2) were transferred to the JPA. The FOST document was signed on August 9, 2000. The Deeds for Transfers 1 and 2 were signed on December 12, 2000 and July 3, 2001, respectively.

- 20.34 acres of land (E2 Transfer) were transferred to the JPA. The FOST document was signed on January 3, 2001. The Deed was signed on February 14, 2001.

- 1.75 acres of land with three buildings (E1.13.501(3) Transfer) were transferred to the JPA. The FOST document was signed on January 25, 2001. The Deed was signed on July 13, 2001.

- 7.3 acres of land comprising of Building 350 Compound and Building 3181 (E7 Transfer) were transferred to the JPA. The FOST document was signed on January 25, 2001. The Deed was signed on July 13, 2001.

- 74.63 acres of land with seven buildings were transferred to the JPA to be used by Auburn University. The FOST document was signed on August 9, 2000. The deed was signed on December 12, 2000.

- E1 transfers 3 and 4 properties are planned for future transfers under this transfer mechanism to the JPA.

2.3.5 Negotiated Sale

The U.S. Army may sell the property by negotiation to state or local agencies at fair market value. A sale could also be negotiated with private entities. Under negotiated sale, property is valued as an economic unit. At the writing of this document, no property at FMC has been identified for negotiated sale.

2.3.6 Competitive Public Sale

Sale to the public could occur through either an invitation for bids or an auction. Property is sold and conveyed as an economic unit to the highest bidder at no less than fair market value. At the writing of this document, no property at FMC has been identified for competitive public sale.

2.3.7 Widening of Public Highways

At this writing, road-widening projects are not scheduled at FMC. However, construction of the Eastern Bypass and other major roads is proposed. Major roads will provide truck access to the installation and connect the proposed industrial park in the northern Main Post to the Eastern Bypass.

2.3.8 Donated Property

At the writing of this document, no property at FMC has been identified for donation.

2.3.9 Interim Leases

The Military Leasing Act of 1956 (10 U.S.C.2667), as amended, permits the U.S. Army to implement interim leasing of excess facilities if it is in the public interest. Under this provision, the lease cannot exceed 1 year but may be renewed annually by the U.S. Army for up to 5 years.

A long-term lease may be instituted if it would promote national defense or be in the public's interest. Prior to any leasing or permitting, the U.S. Army must complete a Finding of Suitability to Lease (FOSL), documenting that the facility is clean and safe to use. Leased properties may be transferred by deed to future owners when the property is disposed. At the time of this writing, the following properties have been leased:

- Approximately 2,387 acres of land with 854 facilities were leased to the JPA. A FOSL document was signed on January 10, 2000. A lease was signed on January 18, 2000.

- Approximately 355 acres of land with 59 facilities (parks and recreation facilities) were leased to the City of Anniston for recreational purposes and administrative operations. A FOSL document was signed on August 20, 1999. A lease was signed on August 25, 1999.

Figure 2-7 and Table 2-4 show currently leased properties.

2.3.10 Permits/Easements

The FMC facility had previously established "outgrants" (easements and permits). Prior to installation closure, each outgrant was reviewed individually and a determination made regarding continuation or termination of the agreement. Active outgrants are included in Appendix D.

2.3.11 Caretaker of Property Until Disposal

At the completion of the realignment of the mission at FMC, utility systems not required for continued FMC operations or interim lessees were privatized or placed in an inactive caretaker status until the property is transferred to new owners. Army Regulation 210-17, "Inactivation of Installation," requires that "inactive facilities and areas be maintained to the extent necessary to insure, as applicable, weather-tightness, structural soundness, protection against fire and erosion, conservation of natural resources, and the prevention of major deterioration..." with "minimum required staffing to maintain an installation in a state of repair that maintains safety, security, and health standards."

Two cemeteries will remain federal government property. The Post Cemetery and the Prisoners of War (POW) cemetery will remain property of the DOD; however, at the time of this writing, it is not known who will maintain the property. The property will be under caretaker until further notice.

3.0 Installation-Wide Environmental Program Status

This section provides a summary of the status of current environmental programs at FMC. It includes discussion of the status of the natural and cultural resources at FMC. The environmental condition and suitability for transfer of the property are provided, as well as a history of actions FMC has taken in the past to comply with all applicable environmental regulations. This section also describes efforts taken by FMC to involve community organizations during Base closure activities.

3.1 Environmental Program Status

The Site Manager is responsible for maintaining all environmental programs and remediation efforts at FMC. The programs are executed by the FMC Environmental Office. Environmental programs are conducted in accordance with applicable DA and DOD regulations and state and federal regulatory programs, including those administered under the Clean Air Act, Clean Water Act, Safe Drinking Water Act, RCRA, and Toxic Substance Control Act (TSCA).

FMC has had a comprehensive environmental program since 1977. An overview of some of the major milestones in the environmental programs for the installation is provided below:

- Several environmental assessments have been conducted at FMC. FMC initial Installation Assessments were completed in 1977 and 1984. An enhanced preliminary assessment was completed in 1990. Seventeen sites, consisting of chemical training sites and landfills, were identified and investigated under the IRP between 1993 and 1995. The Hot Cell (radiological site) was also investigated under the IRP. All IRP sites on the Main Post have either been appropriately remediated (Hot Cell) or they have been transferred to the BRAC program (landfills and chemical sites). All future work at sites within the Main Post will be conducted using the BRAC program and BRAC funds. IRP sites in Pelham Range will remain in the Defense Environmental Restoration Account (DERA) program and will be managed by the DA through the National Guard Bureau.

- Several programs were in place at the installation prior to closure. The programs address underground storage tanks (UST) and aboveground storage tanks (AST), RCRA, CERCLA, polychlorinated biphenyls (PCB), asbestos, LBP, radon, water supply and wastewater, air, medical waste, oil-water separators, pesticides, stormwater, Emergency Planning and Community Right-to-Know Act (EPCRA) reporting requirements, spill prevention control and countermeasures, radiological and radioactive waste, and UXO.

- In 1997, FMC conducted an Environmental Baseline Survey in accordance with CERCLA and CERFA requirements to identify additional sites requiring further action. CERFA designations were assigned to parcels, and non-CERCLA issues were identified, such as LBP on buildings and structures, asbestos, radon, and others. Properties that are currently eligible for transfer and those that require environmental evaluation prior to release for transfer/lease were identified and are summarized in Tables 3-1 and 3-2 and are shown on Figure 3-1. If any new areas of concern are identified, they will be addressed according to the strategy described in Chapter 4.0.

- Some environmental programs - such as PCBs, radon reduction, medical waste, pesticides, waste water treatment, and water supply - were completed, and regulated units closed, prior to or soon after installation closure and transfer. Other programs - such as National Pollutant Discharge Elimination System (NPDES) permits, USTs/ASTs, radiological facilities, hazardous wastes, OB/OD, EPCRA, NEPA, natural and cultural resources, and community involvement - became the responsibility of a TRADOC transition force after the September 30, 1999, closure date and were placed in "caretaker" status. All environmental programs that are necessary to maintain compliance and which were active when FMC closed are maintained by the transition force.

- FMC has maintained various notifications, permits, and registrations with federal, state, and local agencies for facilities within the installation in compliance with environmental regulations. Permits in force at the time of Base closure were either terminated by or returned to ADEM, modified to reflect changed conditions after closure, or maintained for operations at the installation.

- SIs and remedial investigations (RI) are currently underway at FMC under the CERCLA. Table 3-1 identifies each of the parcels that has undergone or is undergoing investigation as part of the BRAC program. Figure 3-1 shows the location of each of the parcels at FMC.

3.2 Compliance Program

Several compliance-related early actions and interim actions have been completed at FMC in order to reduce or eliminate potential contamination at the installation. These actions include removal of indoor pistol ranges in attics of two buildings, petroleum-contaminated soil removals and tank removals related to UST management, PCB transformer removal, cleanup of the Hot Cell, and removal of OE material and UXO along parts of the Eastern Bypass route through the installation.

A description of the various environmental compliance programs being implemented at FMC is provided in the following sections.

3.2.1 Unexploded Ordnance (UXO)

Numerous sites at FMC are either known to contain or are suspected to contain UXO. The EBS (ESE, 1998) identified the maximum historical extent of each existing range and historical range. The presence of UXO could present a hazard to reuse activities such as construction, intrusive investigation of hazardous waste site contamination, and most types of agriculture or silviculture operations.

An archive search report to determine use and establish types, quantities, and areas of disposal of UXO at the installation was completed by the USACE, St. Louis District, in July 1999. The report provided recommendations for sites requiring further action. Table 3-3 presents all known UXO sites at the installation. Presently, all known firing ranges on the Main Post are no longer active. The Army controls access to these areas through closed gates and police security.

In anticipation of the construction of the Eastern Bypass, the U.S. Army Engineering and Support Center, Huntsville, conducted an EE/CA to determine the risk reduction alternatives for OE and UXO along the bypass route through the installation and prepared an action memorandum. The selected alternatives, as stated in the Final Action Memorandum dated May 2, 2001 for the Eastern Bypass, are currently being implemented.

An EE/CA and an action memorandum were prepared for M2 Area, a subsection of Area 45, that was scheduled for transfer to the JPA. Removal of OE was conducted in November 2000. A statement of clearance for M2 Area is included in Appendix D.

Based on results of records review, field reconnaissance, and parcel boundaries defined by the Army, four additional EE/CAs are underway, one each for the M1.01 area, Alpha area, Bravo area, and the Choccolocco Mountain Charlie area (Figure 3-2).

3.2.2 Chemical Warfare Materiel (CWM)

A variety of training exercises were conducted by the U.S. Army Chemical School at FMC. All training exercises involving biological simulants, chemical warfare agent simulants, or live chemical warfare agent were reportedly of a defensive nature. Training exercises taught the detection and decontamination of chemical and biological agents, accident response procedures, and the safe handling of chemical warfare agents. Rounds containing chemical agent were never fired at FMC. Organisms were used to simulate biological agents during defensive training exercises and tests.

All sites at the installation where disposal or other activities would cause the site potentially to be contaminated with CWM are listed in Table 3-4 and shown on Figure 3-3. The sites will be properly investigated and remediated under the BRAC program prior to transfer, if contamination is found. At the time of this writing, one EE/CA is underway for all CWM sites at the installation.

Prior to Base closure, the use of toxic chemical warfare materiel was restricted to the Chemical Defense Training Facility (CDTF). The U.S. Army has transferred the CDTF as an operational facility, to be used by the DOJ for the same purposes for which it was used by the U.S. Army.

3.2.3 Radiation

NRC Licensing. The radiation management program at FMC was implemented in accordance with the applicable federal, state, and U.S. Army regulations. FMC held a Nuclear Regulatory Commission (NRC) license for the storage of sealed radioactive sources within instruments and articles. FMC activities requiring radioactive material were conducted in accordance with NRC special nuclear material License No. 1877. The U.S. Army Chemical School performed training activities involved with the nuclear defense program. These training activities required the use of radioactive materials and the equipment needed for testing. The radioactive materials and equipment were contained within a secure vault located in Siebert Hall, Building 1081. The radioactive isotopes generated as by-products from the material were likewise regulated by NRC License No. 01-02861-05. NRC License No. 01-02861-04 was for Building 3192 (Hot Cell).

In 2000, the USACE, St. Louis District, prepared a historical assessment of radiological training facilities to determine the status of the facilities under current regulations and guidance prior to remediation, closure, or transfer. Based on the results and recommendations of the historical assessment, the Industrial Operations Command, Rock Island, Illinois, conducted closeout status surveys. The health physicists from both EPA and Alabama Department of Public Health (ADPH) participated in surveys and oversight of surveys and remediation by the U.S. Army and its contractors. EPA, ADPH, ADEM, and NRC also jointly conducted oversight of the final status surveys. The survey and cleanup standards proposed as applicable or relevant and appropriate requirements (ARAR) included: the NRC guidance document NUREG/CR5849; the decommissioning cleanup standards proposed in 10 Code of Federal Regulations (CFR) Part 20; the proposed Multi-Agency Radiation Survey and Site Investigation Manual; and the Risk Assessment Guidelines for Superfund. Final Commodity Site Survey Reports Phase I and II

were submitted in March and October 2000, respectively. No further action is required for the sites.

NRC Decommissioning. License No. 1877 was terminated in July 2000. Based upon review of the Remediation and Closeout Survey Report (Allied Technology Group, 1996), an Industrial Radiation Survey and Facility Closeout Verification Survey Report (CHPPM, 1998), and sample analytical results for Building 3192 and the surrounding fenced area at FMC, NRC concluded that the facility's residue radioactive material was below NRC criteria. Therefore, NRC terminated license No. 01-02861-04 for Building 3192 (Hot Cell) in October 1998. License No. 01-02861-05 was amended in July 2000 to remove Building 1081 and Alpha field; the two commodity sites were released for unrestricted reuse. The license remains active and will be terminated upon completion of decommissioning activities at Rideout Field.

3.2.4 Radon

As a result of Public Law 100-551 Title III of the TSCA, the U.S. Army Radon Reduction Program was initiated in 1989 at FMC. FMC tested 451 of its 714 buildings and found radon levels above the EPA-recommended action level in 6 buildings, all clustered around the headquarters hill area. The U.S. Army conducted remediation for five of the six buildings. The sixth building was an unoccupied building; thus, it did not have to be remediated. Included in the 451 buildings tested were schools, hospitals, daycare facilities, billets, and family housing. Results of the radon testing and the status of the radon program at FMC are summarized in Tables 3-5-1 and 3-5-2, respectively, and the detailed report is included in Appendix D. Buildings found to have elevated radon levels under the testing program are plotted on the non-CERCLA map (Figure 3-2). Relevant radon assessment data pertaining to FMC will be included in the property transfer documents.

3.2.5 Storage Tanks

USTs and ASTs at FMC have historically been used for the storage of petroleum and non-petroleum products. Compliance and environmental restoration activities related to these storage tanks are described in this section.

Underground Storage Tanks (UST). Underground storage tanks (UST) at FMC have historically been used for the storage of petroleum products for heating purposes, vehicle and equipment fueling, and maintenance operations. FMC established a tank management program in the early 1980s in compliance with ADEM regulations. Prior to 1990, USTs were replaced as needed. Tanks were emptied and removed when FMC determined either a leak was present, a

facility was demolished, or the tank was no longer needed. Beginning in 1990, a series of screenings, tank tightness checks, and upgrades began on existing USTs.

From 1991 through 1993, tightness tests were performed on heating oil USTs at various buildings around FMC (Fitzgerald, 1992 and 1993). In 1994, 11 waste oil USTs, 1 heating oil UST, and 1 gasoline UST were either removed or closed in place. In 1996, 26 heating oil USTs, four gasoline USTs, and one diesel UST were removed or replaced. In 1997, all of the secondary fuel USTs for the sewage pump stations were replaced.

The following activities have been performed under the BRAC closure program:

- All records of past investigations/closures for USTs have been reviewed to determine the adequacy of previous UST activities with respect to current ADEM tank closure guidelines. Results of the record search indicated that :

  - A total of 157 current and historical USTs at 79 parcel locations have been documented at FMC. Tank contents include heating oil, waste oil, gasoline, diesel, fuel oil, and unknown contents.

  - At this writing, 48 of the USTs at 30 parcel locations are active; the remaining tanks (109) have been removed, closed in place and/or replaced.

- SIs, including soil and/or groundwater sampling, were conducted at all UST areas to determine environmental conditions prior to property transfer.

- UST closure assessments were conducted for 25 UST sites to determine whether chemical constituents are present, and if present, whether the concentrations would present an unacceptable risk to human health or the environment. The Closure Assessment Report issued February 2001 recommended No Further Action and unrestricted land reuse for the 25 sites investigated.

- Investigation, removal, and disposal of USTs and/or associated piping was conducted for 8 UST sites in accordance with state and federal regulations. The UST Removal and Closure Report issued March 2001 reported that one UST was found and removed at EBS CERFA Parcel 137(7) and that no USTs were found at the other sites investigated.

- FMC proposes to transfer 48 USTs in conjunction with the transfer of associated properties.

A complete inventory of the USTs on the installation is provided in Table 3-6. The table includes information on the location, contents, and status of each UST site.

Aboveground Storage Tanks (AST). FMC managed all ASTs in compliance with Army Regulation (AR) 200-1: federal requirements, including 40 CFR Parts 110, 112 and 116; and ADEM Regulation 335-3-6.

FMC conducted a program of leak detection and periodic precision testing of federally regulated tanks until base closure in September 1999. Tanks that were no longer in operation at the time of installation closure were removed in accordance with ADEM regulations. ASTs located at ranges were removed during range abandonment activities. The Army transferred 5 propane ASTs located on Summerall Gate Road to Alabama Gas Company. The transferred tanks were removed in 2001. An inventory of ASTs at FMC is presented in Table 3-7. Some of the heating oil ASTs did not have the required secondary containment system; however, these tanks were routinely maintained and inspected by Johnson Controls, a firm under contract by the Army to perform maintenance at the installation. No releases have been documented. The CDTF had three ASTs: a 20,000-gal AST for wastewater, a 4,000-gal AST for a caustic soda solution, and a 4,000-gal AST that contained sulfuric acid for a short time after the CDTF opened. The sulfuric acid was removed from the tank after it was determined that it was not needed for operations. The AST that previously held sulfuric acid is currently used to hold diesel fuel for a backup generator. In July 2001, the CDTF was transferred to the DOJ.

Four bromine ASTs formerly located at the Bromine Pad behind Building 3195 held a radioactive bromine solution but have since been removed from the installation. Tanks that were no longer in operation were removed in accordance with ADEM regulations.

FMC will transfer ASTs in conjunction with the transfer of associated properties.

3.2.6 Polychlorinated Biphenyls (PCB)

FMC's PCB management program complies with AR 200-1, the Federal Toxic Substance Control Acts found in 40 CFR 761, Department of Transportation regulations, and ADEM PCB regulations. FMC had a PCB management and tracking program. A quarterly inspection program was performed on all in-service transformers and capacitors, and a log of these inspections was maintained. By definition, electrical equipment is "PCB-contaminated" if it contains between 50 and 499 parts per million (ppm) of PCBs. A "PCB transformer" is defined as any transformer containing 500 ppm or greater of PCB.

A total of 735 transformers were reported to be in service at FMC in 1981. In 1992 in-service outdoor transformers on the installation were tested for PCB content. Of the transformers tested,

two transformers qualified as "PCB transformers." In 1993, the two PCB transformers were removed from service and properly disposed. The PCB transformers were located at Buildings 2102 (main library) and 3706. The transformers had developed leaks in June and September 1993, respectively. The leaks were cleaned up by EPA standards, and soil testing results showed the site to be PCB-free. By January 1997, FMC removed 36 PCB-contaminated transformers from service and turned them in to Defense Reutilization Marketing Office (DRMO) for appropriate disposition. In 1998 and 1999, 6 transformers in the electrical substation were tested for PCB content; 3 transformers were found to contain 50-499 ppm PCB.

All transformers that were removed from service were reportedly turned in to Defense Property Disposal Office (DPDO), later known as DRMO disposal. Transformers awaiting disposal were staged at one of the following areas: temporary transformer storing and staging area on a slab adjacent to Building 4437 (at the Former Tar Plant), Building 1800 (Former DPDO), Building T-342 (former DRMO), and the current PCB storage building (Building 4460) located at the Contractor Laydown Area. Past transformer leaks were remediated by the FMC Department of Engineering and Housing (DEH) and later by the Directorate of Environment (DOE). Soils from leak locations were excavated and confirmatory samples collected to confirm that the area was properly and adequately remediated. Excavated soil was drummed and disposed of as PCB-containing material in accordance with applicable regulations. All staged transformers have been removed from the installation. The sites where transformers were staged are under investigation under the BRAC program.

Alabama Power Company purchased the electrical distribution system in September 1999, including the 3 PCB-contaminated transformers in the substation. Table 3-8 is an inventory of all known regulated transformers at FMC.

3.2.7 Herbicides and Pesticides

Prior to closure, pesticide and herbicide management and use were conducted in accordance with the requirements of the Federal Insecticide, Fungicide, and Rodenticide Act. FMC operated under a pest management plan, which included all procedures and programs related to pesticides. Pesticides and herbicides were stored and mixed at the Main Post at the Pesticide Mixing and Storage Facility (Building 211) within the DEH compound and at the Golf Course Pesticide Mixing and Storage Facility (Building S-2252). FMC personnel documented pesticides and herbicides stored and used. Individuals who applied pesticides and herbicides were properly certified. The Installation Spill Contingency Plan was followed for pesticide spills and leaks. Disposal of unwanted pesticides was conducted through the DRMO.

Based on a separate biological opinion by the USFWS, a Golf Course pesticide management plan was implemented to control pesticide/herbicide applications at the Golf Course to protect the gray bat habitat at FMC. This plan remains in force with the current lease of the Golf Course property, and language will be included in transfer documents for the property.

Historical records of pesticide use and application procedures are incomplete. Therefore, areas suspected of pesticide contamination are being investigated under the BRAC program.

3.2.8 Asbestos

Asbestos-containing material (ACM) is regulated by EPA, the Occupational Safety and Health Administration (OSHA), and the State of Alabama. ACM at FMC facilities is also managed in compliance with the DA guidance "Lead-Based Paint and Asbestos in U.S. Army Properties, Affected by Base Realignment and Closure" and DOD memorandum entitled "Asbestos, Lead Paint and Radon Policies at BRAC Properties," dated October 1994.

DOD policy with regard to ACM is to manage ACM in a manner protective of human health and the environment and to comply with all applicable federal, state, and local laws and regulations governing ACM hazards. Prior to closure, the U.S. Army conducted abatement of friable asbestos only if it was of a type and condition that were not in compliance with applicable laws, regulations, and standards or if it posed a threat to human health.

Several surveys were conducted to document the existence, extent, and condition of ACM at the installation. ACM surveys were conducted in various buildings by Environmental Management Inc. (EMI) in September 1986 and March 1987 and by Roy F. Weston, Inc. (Weston) in November 1990. These surveys were conducted on 122 buildings used for family housing and barracks and 52 buildings used for various other purposes (e.g., museums and administration). In 1997 and 1998, Riesz Engineering conducted an inspection for the presence of ACM in all buildings that were likely to contain ACM on the Main Post. Table 3-9 presents a summary of the ACM survey. Detailed results of the survey are included in the ACM Survey Report (Riesz Engineering, 1998a). Buildings in which ACM problems have been identified are noted on the non-CERCLA map (Figure 3-2).

3.2.9 Lead-Based Paint (LBP)

LBP at FMC is managed in accordance with DA policy guidance "Lead-Based Paint and Asbestos in U.S. Army Properties Affected by Base Realignment and Closure" and DOD memorandum entitled "Asbestos, Lead Paint and Radon Policies at BRAC Properties," dated

October 31, 1994. The DOD policy related to LBP at BRAC properties was developed to comply with Title X of Public Law 102-550 (the Residential Lead-Based Paint Hazard Reduction Act of 1992). Title X applies to BRAC properties to be transferred after January 1, 1995, that were constructed prior to 1978 and are to be transferred for residential use. Residential structures built before 1978 are assumed to contain LBP and LBP hazards (as defined by the Act). Due to the large number of buildings at FMC that were built prior to 1978, most buildings are considered to potentially contain LBP components.

An LBP survey was conducted on various buildings at FMC by the USACE, South Atlantic Division Laboratory. The resulting LBP Risk Assessment Report was developed by John Calvert Environmental, Inc. in July 1995. Twenty-six community-related buildings (e.g., churches, recreational centers, and health care facilities), and 173 family housing buildings were surveyed. The uniformity of the type of paint used, the type of construction, and the age of the family housing buildings allowed for the formation of 12 housing groups. In addition, five soil samples were collected by South Atlantic Division Laboratory which exceeded 400-mg/kg lead within 3 ft of the building.

In March 2000, the USACE Mobile district retained IT Corporation (IT) to perform LBP surveys, LBP risk assessments, and composite soil sampling. LBP surveys and soil sampling were conducted in four buildings. LBP risk assessments were performed in 39 housing units. In November 2000, LBP risk assessments were done in 47 housing units. Results are included in the Lead-Based Paint Surveys and Risk Assessments (Phase I) and the Lead-Based Paint Risk Assessments (Phase II) Reports (IT, 2001j and 2001p).

A comprehensive survey of lead in soil has not been conducted at the installation. However, in 1994, Calvert John Environmental, Inc. performed soil sampling and analysis to determine lead concentrations in soil at several buildings at FMC. Soil samples were collected from 26 community-related buildings (e.g., churches, recreational centers, and health care facilities) and 173 family housing buildings. Of all the buildings sampled, soil in the vicinity of five buildings contained lead at concentrations exceeding 400 mg/kg. Soil within 3 ft of the Workshop (Building 129), Chapel (Building 893), Soldiers Chapel (Building 1740), and Family Housing (Building 2242), and soil between 12 and 20 ft of the vicinity of the WAC Chapel (Building 2293) exceeded 400 mg/kg. Prospective owners will be notified of lead in soil in the vicinity of the buildings at the installation.

3.2.10 Wastewater Discharges

At one time, installation point source discharges were covered under National Pollutant Discharge Elimination System (NPDES) Permit No. AL003803, effective April 1976. Permitted sources covered by this permit included six vehicle washracks, blowdown from 10 cooling towers, blowdown from 2 boiler plants, and filter backwash from swimming pools. All of these point sources have since been connected to the sewer system, and effluent is treated at the FMC Wastewater Treatment Plant (WWTP).

The Army applied for and obtained from ADEM in 1993 a NPDES permit No. AL0055999 to cover storm water discharges at industrial sites. FMC has a Storm Water Pollution Prevention Plan and has instituted controls such as management practices, training, and inspections to prevent contamination of storm water.

The following were the installation point source discharges covered under the NPDES Permit issued in 1998:

• Outfalls 001 and 002	Oil Storage Areas, Range 24A and Training Area 4A Pelham Range
• Outfalls 003, 004, 005, 009, 010, 011	Motor Pool Operations
• Outfalls 016, 017, 040	Active Industrial Landfill
• Outfalls 025 through 027	Holding Site for Metal Materials (DRMO)
• Outfall 028	Open Burn/Open Detonation Site
• Outfall 033	Fog Oil Storage Area.

Regularly scheduled effluent sampling programs continued to monitor the performance of such facilities. The NPDES permit was modified in December 2000 to reflect closure of many operations under BRAC. The industrial landfill outfalls, DSN016, 017, and 040, are the only remaining outfalls on the permit.

The wastewater management system included an extensive network of gravity collection sewers, force mains, three pumping stations, and waste water treatment plant. The Army built the original WWTP for FMC in 1918 and has upgraded it several times, most recently in 1995. In 1974, the WWTP was leased to Water Works and Sewer Board of the City of Anniston. In 1997,

operation of the WWTP was contracted to Operations Technologies, Inc., who also held the NPDES Permit (Permit No.AL0024520) (Table 3-10).

Operations Technologies, Inc. operated the FMC WWTP under a consent order issued by ADEM, arising from a fish-kill on July 29, 1997, that impacted approximately 1.5 miles of Cane Creek, into which the plant discharged. The fish kill appeared to be a result of low dissolved oxygen due to discharge of insufficiently treated wastewater. During the time of the fish kill, the WWTP was experiencing a flow of over 10 million gallons per day as a direct result of Hurricane Danny. The WWTP is designed for a flow of 2.2 million gallons per day and normally experiences flows of 1.0 to 1.5 million gallons per day during periods of normal weather patterns.

After FMC closure under BRAC, the waste water collection system and WWTP were conveyed to the Water Works and Sewer Board of the City of Anniston under a Public Benefit Conveyance. The Board assumed operation and control of the systems effective April 1, 2000.

3.2.11 Air Emissions

To protect human health and enhance the air quality and as required by state and federal regulations, FMC had established programs to ensure that air emissions were within source threshold levels. Under the Alabama Administrative Code, Division 355-3, the ADEM requires that an annual air emission inventory be submitted. A comprehensive Air Pollution Emission statement was initially developed for FMC in 1995. The air emission inventory identified four types of permitted emission sources at FMC. The sources included boilers, storage tanks, incinerators, and fuel dispensing facilities. ADEM issued the air permits listed in Table 3-11 for the sources discussed below. Based on an ADEM file search (ESE, 1998), there were no air emission permit violations.

The Army operated four boiler plants, plants Nos.1-4, and three of them were permitted as listed in Table 3-11. Boiler Plant No. 4 contained two 20.1 million Btu per hour (MMBtu/hr) boiler units that predated the air permitting system.

Petroleum storage tanks on Main Post at Boiler Plant No.1, Building 3176, and Plant No. 3, Building 1076, were permitted as listed in Table 3-11.

Prior to base closure, there were incinerators at both the CDTF and Noble Army Hospital (later renamed Noble Army Health Clinic). In August 1999 the Army issued a real estate permit to the

DOJ for its training operations at the CDTF and returned its air permit for the CDTF incinerator to ADEM. DOJ acquired an air permit from ADEM for operation of the incinerator and currently owns the CDTF and incinerator. The hospital incinerator was classified as an existing small unit by ADEM and operated under the ADEM Air Division's letter of approval. The Noble Army Health Clinic ceased operation of the medical waste incinerator in May 1999. The U.S. Department of Health and Human Services currently leases the facility from the Army and disposed of the unit in July 2001 under ADEM requirements to replace it with a hot water heating system.

Fuel dispensing facilities were located at Facility 265, the petroleum, oil, and lubrication point gasoline dispensing facility, and Building 2109, the Army Air Force Exchange Services (AAFES) Service Station. The two permits issued to the petroleum, oil, and lubrication point covered the gasoline tanks in the tank farm and the use of the gasoline bulk plant for filling field tank trucks. The permit for the AAFES station covered the gasoline tanks in the tank farm.

Three propane storage tanks at Facility 3217 were permitted air sources.

Since Base closure in 1999, Fort McClellan has returned eleven air permits to ADEM. The Army notified the JPA regarding the return of permits associated with or affecting properties that it would or has transferred to JPA, so that the JPA could, if necessary, apply to ADEM for a name change on any of those permits. As shown in Table 3-11, the Army is retaining 4 permits for continued operations at Boiler Plant No. 2 and the petroleum, oil, and lubrication gasoline dispensing facility.

3.2.12 Oil/Water Separators

FMC regulated all active installation vehicle washracks under the standards set forth by FMC DOE No. 420-15 (December 1994). The post regulation required that vehicle washracks be operated and maintained in such a manner as to ensure that the associated oil/water separators were used for their intended purposes of pretreatment of wash waters prior to the water entering the sanitary sewer system. The regulation required proper handling of waste oil, either by recycling or disposal. SIs are currently being conducted at oil/water separators prior to transfer, to confirm that operations did not contaminate the surrounding land surface.

In accordance with an agreement with ADEM, all sediments from the installation's washracks were being disposed of by spreading them in a thin layer on the surface portion of the active

industrial landfill (FMC DEH, 1989). The sludge was considered a "special waste" and is covered in the industrial landfill permit issued by ADEM as a permitted waste.

Most of the washracks closed except for two locations when the installation ceased its military training mission. Under an agreement with FMC, the Army contractor, IT Corporation (IT) is using the vehicle washrack at Building 339 to clean the equipment associated with the hazardous toxic and radiologic waste (HTRW) investigation. IT plugged the washrack sediment basin in order to take samples of the captured wash water prior to discharging it to the sanitary sewer. The Transition Force continues to use the wash rack in the Transition Force compound to wash its vehicles.

3.2.13 National Environmental Policy Act (NEPA)

TRADOC developed the final EIS documentation (USACE, Mobile District, 1998) for the disposal and reuse of the installation. The final EIS addressing the environmental and socioeconomic impacts of the disposal and reuse of the property at FMC, including foreseeable reuse alternatives, was submitted to the BCT team in August 1998. An ROD was signed in June 1999.

3.2.14 RCRA Facility: Open Burning/Open Detonation (OB/OD)

In December 1988, FMC applied for and obtained from ADEM a RCRA Part B Subpart X Permit (No. AL8213370000) for the OB/OD Area on Pelham Range (CH2M Hill, 1994). Until 1996, OE waste were destroyed in this area by burning and detonation. FMC Environmental Office is in the initial stages of closure of the OB/OD Area under RCRA. Radian International prepared a conceptual plan, which received ADEM approval. The discovery of improved conventional munitions in the closure area delayed the start of field work. In January 2001, the Army submitted a request to U.S. Army Technical Center for Explosive Safety (USATCES) for waiver to deal with improved conventional munitions and continue the closure effort. DA Safety issued the waiver in June 2001, based upon recommendation by USATCES, and field work began July 2001.

3.2.15 Hazardous Waste Management

Hazardous waste programs at FMC are conducted under AR 200-1 and the federal requirements found in RCRA Subtitle C, 40 CFR 260 through 269, 40 CFR 117, 49 CFR 171 et seq., Department of Transportation regulations, ADEM Regulations 335-14, and the installation's hazardous waste management plan.

FMC historical use is that of a U.S. Army training facility. A search of historical and title documents, a review of aerial photographs, and interviews conducted during the EBS revealed that heavy industrial activities have not occurred at FMC since being occupied by the U.S. Army.

FMC operates under the RCRA large quantity generator status with the issued EPA Identification No. AL4 210 020 562. The generator designation was obtained after the interim status container storage area located at the former DRMO was closed in 1988 (Weston, 1990a). ADEM approved FMC's Clean Closure Certification for the interim storage facility on July 16, 1996.

FMC accumulates hazardous waste on site for 90 days or less under the requirements of 40 CFR 262.34. On June 28, 2001, the installation closed the 90-day containment building (Facility 348) that had been used since 1990. FMC continues to operate a 90-day hazardous waste storage area in a portable hazardous materials building located in the Transition Force compound.

The installation has not received any Notices of Violation from either ADEM or EPA Region IV for RCRA operations on Post since 1993. FMC has corrected prior violations to the satisfaction of both ADEM and EPA and has documentation on file in the Environmental Office to demonstrate regulatory acceptance of the corrective actions. These Notices of Violation are discussed in further detail in the EBS (ESE, 1998). FMC continues to submit biennial Hazardous Waste Reports and an annual Notification of Regulated Waste Activity to ADEM.

3.2.16 Solid Waste Management

Solid waste management programs at FMC 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 ADEM Regulations 335-13.

FMC continues to operate and dispose of construction and demolition debris in a 12.6-acre industrial landfill. Construction debris includes but is not limited to masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products (ESE, 1998). Prior to closure, the Army also disposed of non-hazardous ash from the CDTF incinerator in the industrial landfill. FMC sanitary solid waste is disposed by a contractor off-post at a Subtitle D facility in Cropwell, Alabama.

Landfill No. 4 originally accepted both sanitary and construction debris wastes. In April 1994, the sanitary portion was closed and capped in conformance with ADEM requirements. The

construction and demolition landfill is located on a portion of Landfill No. 4 in an area that was never used to dispose of sanitary waste. The solid waste permit (No. 08-02R) was modified in October 1995 to limit disposal at the industrial landfill to 30 tons per day average of construction and demolition debris, tires, trees, miscellaneous plastics and paper, packing and crating debris, asbestos, and similar types of inert or construction/demolition debris.

The permit was renewed for another 5 years effective November 2000 and was modified to allow disposal of up to 1,200 tons per day of non-hazardous industrial, construction, and demolition waste over the closed sanitary waste area (40.4 acres) as well as the 12.6-acre industrial area, in case additional area is needed for disposal of cleanup industrial waste.

3.2.17 Medical Waste

The Noble Army Community Hospital Incinerator (Building 294) was in operation since 1990 and burned approximately 1,000 to 1,200 pounds of regulated medical waste per month. Regulated wastes that were burned in the medical waste incinerator included cultures and stocks of infectious agents, pathological wastes, human blood and blood products, used sharps, isolation wastes, and unused sharps. The ash was disposed at an off-site landfill.

The Noble Army Hospital ceased operation of the incinerator May 3, 1999, and the Army rendered it inoperable in June 1999. Browning Ferris Industries, a licensed medical waste disposal firm, then managed and disposed of medical waste until the hospital closed on September 30, 1999. The DA issued a real estate permit to the U.S. Department of Health and Human Services (HHS) to use the hospital property beginning October 1, 1999. HHS did not use the incinerator and disposed of it in July 2001 according to ADEM regulations.

3.2.18 Pollution Prevention

FMC managed its Pollution Prevention Program under requirements of the Federal Pollution Prevention Act of 1990 as directed by Executive Order (EO) 12856. Prior to closure, Fort McClellan's Environmental Quality Control Committee set policy and made decisions regarding pollution prevention. The Director of Environment, as the designated Pollution Prevention Coordinator, was responsible for implementation and monitoring of the pollution prevention program. In 1996, FMC met the Emergency Planning and Community Right-to-Know Act (EPCRA) mandate in EO 12856 to reduce the release and off-site transfer of Toxic Release Inventory (TRI) chemicals by 50 percent by December 31, 1999. FMC submitted Tier I, Tier II, and Form R reports to the appropriate agencies as required by EPCRA.

There is relatively little activity under pollution prevention, due to closure under BRAC in September 1999. The Transition Force environmental office filed a 2000 Tier II Emergency and Hazardous Chemical Inventory to ADEM, Anniston Fire Department, and the Calhoun County Emergency Management Agency.

3.2.19 Defense Environmental Restoration Program (DERP)

The Defense Environmental Restoration Program (DERP) was established in 1984 to promote and coordinate efforts for the evaluation and cleanup of contamination at DOD installations. The program currently includes the IRP under which DOD installation investigations and site cleanups are conducted. The program is carried out in consultation with the EPA, ADEM, and other regulatory agencies and in compliance with CERCLA and SARA guidelines.

FMC began IRP activities in 1977. Seventeen sites, consisting of chemical sites and landfills, were identified and investigated under the IRP. The Hot Cell (radiological site) was also investigated under the IRP. All IRP sites on the Main Post have either been appropriately remediated (Hot Cell) or have been transferred to the BRAC program (landfills and chemical sites). All future work at sites within the Main Post will be conducted using the BRAC program and BRAC funds. IRP sites in Pelham Range are being evaluated under the DERP program and will be managed by the National Guard Bureau upon transfer of the property.

3.2.20 Landfills/Fill Areas

SIs and fill area studies including extensive sampling and geophysical investigations were initiated to identify chemicals of potential concern, assess potential impact to soils, groundwater, and other media, and determine the vertical and horizontal extent of the fill areas. Twelve fill areas were identified at FMC and are being addressed through the fill area EE/CA. In addition, extensive subsurface investigations for geological formations are currently ongoing for Landfill No. 3.

3.2.21 Ranges

The U.S. Army operated ranges to accomplish a variety of training missions, including orientation, firing, bivouac, and other surface-type training activities. This section discusses the small arms ranges and fused ordnance ranges on FMC where the Army has identified issues of environmental concern. An inventory of all identified ranges within the Main Post and Choccolocco Corridor is presented in Table 3-12. The ranges occupy a large portion of the installation. Although numerous ranges have been included in Table 3-12, many of the physical boundaries overlap as shown in Figure 3-4.

Several contaminants potentially present at ranges are not covered by the Munitions Rule. The BCT will assure that ranges are investigated for the presence of hazardous substances in soil, including lead, explosive residue, solvents, and other contaminants. Solvents may have been used at the ranges to clean weapons after training exercises. All known firing lines and impact area locations within the Main Post and Choccolocco Corridor are presented in Figure 3-4. All locations of impact areas and firing lines are approximate and may include locations short of, or some distance behind, the actual target location.

All ranges within the Main Post ceased operation after closure of FMC. Hazardous substance issues at ranges will be addressed under CERCLA.

Ranges are classified as either historical ranges or small arms ranges. Historical ranges are ranges that were inactive prior to installation closure; for the most part, they are heavily wooded with substantial ecological habitat. Small arms ranges are clearly defined; the contamination area is known, and it is assumed that a removal action will be conducted. Currently, three EE/CAs are underway for the small arms ranges: Iron Mountain Road, Bains Gap Road, and Baby Bains Gap Road. SIs will be conducted for historical ranges.

3.3 Status of Natural and Cultural Resources Programs

FMC contains many naturally and culturally significant resources, due to the age and large areal extent of the Main Post and Pelham Range facilities, and conducts operations according to Army Regulation 200-3.

3.3.1 Natural Resources

FMC implemented several natural resource management programs and developed an Integrated Natural Resources Management Plan (FMC DOE, 1998). The following programs were conducted prior to closure to manage natural resources for commercial, recreational, erosion control, conservation, and educational purposes:

- Wetland Management Program
- Endangered Species Management Program
- Environmental Awareness Management Program
- Hunting Program
- Forestry Management Programs
- Soil Erosion Management Program.

Wetlands. Wetland habitats within FMC are generally located in the valleys along creek floodplains, near streams, and in depressions. Watersheds and floodplains within the Main Post are illustrated in Figure 3-5. The indicator plant species that assist in defining a wetland include water oaks, sweet gum, bulrush, needlerush, and cattail. The Main Post has an abundance of wetlands representing important habitats for a wide variety of plants and animals.

Wetland communities found on the Main Post are the Marcheta Hill Orchard Seep, Cave Creek Seep, South Branch Cane Creek, and 200 acres west of the airstrip (Endangered Species Management Plan [ESMP]) (Garland, 1995). Additionally, wetland habitat potentially exists at or around the installation's lakes, namely Lake Reilly and Lake Yahou, and along the creeks, namely Cane and Cave Creeks (Weston, 1990a).

Sensitive Habitats. Fort McClellan operated under the guidelines of the Endangered Species Act of 1973, the regulations of the USFWS, Army Regulation 200-3, and its ESMP. The overall objectives of the ESMP are to sustain the existing habitat that supports populations of species identified in the ESMP and to promote the augmentation of these species into unoccupied land that has similar habitats.

The ESMP identifies 11 Special Interest Natural Areas (SINA) at FMC (Figure 3-6). SINAs are locations where the habitat fosters one or more rare, threatened, or endangered species. Because these species are sensitive to environmental degradation, SINAs require management practices that promote the continued well being of these ecosystems. According to the ESMP, the 11 SINAs located on the Main Post include:

- Mountain Longleaf Community Complex
- Cave Creek Seep
- Moorman Hill Mountain Juniper
- Frederick Hill Aster Site
- Bains Gap Seep
- Marcheta Hill Crow-Poison Seep
- Marcheta Hill Orchid Seep
- South Branch Cane Seep
- Stanley Hill Chestnut Oak Forest
- Reynolds Hill Turkey Oak
- Davis Hill Honeysuckle.

Threatened and Endangered Species. Rare species deserving unofficial protection and management measures in the State of Alabama are inventoried and ranked by the Alabama

Natural Heritage Program. Table 3-13 lists the 31 species considered rare and inhabiting certain areas of FMC, as well as candidate species (Garland, 1995). The sensitivity of these rare species to environmental degradation is used to gauge the well being of the habitat as a whole.

Flora. No threatened flora have been identified within the Main Post. Studies of flora are ongoing; if threatened or endangered species are identified, this information will be communicated to state and federal authorities.

Fauna. The one endangered animal observed on the Main Post is the gray bat (*myotis grisescens*) (Garland, 1995). Although there are no reported gray bat roosts on FMC, the gray bat does forage along one of FMC's SINA, the Cane Creek Corridor.

A second endangered species, the red-cockaded woodpecker (*picoides borealis*), has not been observed at FMC since the 1970s in the Mountain Longleaf Community Complex SINA; however, there exists the potential for its return, because it is known to inhabit the Talladega National Forest, adjacent to FMC.

No threatened fauna inhabit the Main Post.

3.3.2 Cultural Resources

All historic properties, including prehistoric and historic archaeological sites and National Register of Historic Places (NRHP) eligible historic structures and districts (Figure 3-7), are being excessed through BRAC and are protected through the use of a Cultural Resources Programmatic Agreement (PA). Signatories to the PA are the U.S. Army, the Advisory Council for Historic Preservation, and the Alabama State Historic Preservation Office (SHPO). The Joint Powers Authority, Native American Tribes, and local historic agencies have input as consulting parties. Under the PA, the Army ensures caretaker activities for these historic sites and structures pending their transfer, lease, or sale. The PA document assures that all historic properties transferred are in compliance with Section 106 of the National Historic Preservation Act (NHPA) and that properties eligible for inclusion to the NRHP, as well as archaeological sites, are protected through deed covenants. Deed covenants for historic structures state that the Secretary of the Interior's guidelines for the preservation of historic structures must be met. Any alteration/renovation of these structures must be done in consultation with the SHPO. In the case of archaeological sites, consultation with the SHPO is required if any site will be adversely affected by activities of the new landowner. Additionally, the PA requires licenses, leases, and

permits to include language requiring the property manager to maintain facilities and sites to prescribed standards.

Paleontological Resources. Paleontological resources have not been catalogued within FMC.

Archaeological Resources. Archaeological and historic surveys have been completed by various entities. A Phase I Cultural Resource Survey of the Main Post addressing both prehistoric and historic resources was conducted, and the final report was approved by the SHPO.

Over 70 archaeological sites, both prehistoric and historic, have been identified within the boundaries of the Main Post of FMC. Of these sites, 22 are potentially eligible or eligible for inclusion to the NRHP and are located within portions of FMC lands that revert to private or municipal ownership. Phase II archeological testing is being conducted or has been conducted on these sites to determine final eligibility for the NRHP. To date, 4 of the 22 sites have been determined eligible for listing. Measures for the management of archaeological sites that are eligible for the NRHP are addressed in FMC Programmatic Agreement among the U.S. Army, Alabama SHPO, and the Advisory Council on Historic Preservation for the closure and disposal of FMC.

Historic and Architectural Resources. FMC contains three historic districts: post headquarters, industrial, and ammunition storage districts. Within these historic districts, 89 buildings are eligible for nomination to the NRHP. New South Associates (NSA) completed a comprehensive architectural survey of FMC in 1994 with the objective of identifying and evaluating all structures greater than 50 years in age (pre-1941); results are presented in the report, *The Military Showplace of the South, Fort McClellan, Alabama: A Historic Building Inventory* (NSA, 1993).

Buildings 81-90, 102-107, and 196-198, located in FMC's Historic Headquarters District, were transferred on December 12, 2000, to the JPA, as stipulated by Quitclaim Deed 1, made and entered into by the United States of America, acting through the Secretary of the Army, under and pursuant to the power and authority contained in the Defense Base Closure and Realignment Act of 1990, PL 101-510, as amended. Additionally, this deed contains language stipulated in Attachment D of the Programmatic Agreement among the U.S. Army, Alabama State Historic

Preservation Officer, and the Advisory Council on Historic Preservation for the closure and disposal of FMC as appropriate.

A historic architecture study of World War II and Cold War Era buildings titled "Historic Context Study: World War II and Cold War Era Buildings and Structures" has been completed for FMC. This historic architecture context study included permanent World War II (1940-1945) and Cold War Era (1946-1989) buildings and structures within the Main Post area. The purpose of this study was to help fulfill the responsibilities of FMC under Section 106 and Section 110 of the NHPA. The Historic Context Study provided a basis for the evaluation of structures constructed since 1940. The final report, dated May 5, 2000, received SHPO approval. Four buildings within the CDTF were determined to meet the criteria for listing. The German/Italian POW cemetery is the only entirely military cemetery located on Post (Figure 3-7).

3.4 Environmental Baseline Survey

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 that the U.S. 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.

In January 1998, the U.S. Army completed an investigation to identify the environmental condition of FMC, in compliance with CERFA. Hazardous waste materials and petroleum management practices were evaluated by available means, including review of historical documents, aerial photographs, compliance records, and hazardous waste management records; interviews with knowledgeable parties; visual inspection of selected buildings, facilities, and other locations; and review of records from asbestos, radon, and LBP programs. Based on the assessment and the history of past activities, groups of buildings, ranges, or other identifiable areas were classified either as CERFA parcels or non-CERCLA parcels (Figures 3-2 and 3-8). The DOD determined that petroleum products and petroleum derivatives should be added to the CERCLA list of potential contaminants; so sites potentially contaminated by petroleum compounds are included in CERFA parcels. The BCT also determined that chemical/biological warfare materials should also be considered CERFA issues. Non-CERCLA parcels are those sites potentially impacted by radon, LBP, asbestos-containing materials, PCBs, radiological materials, or UXO.

3.4.1 CERFA Parcels

To better identify those properties that are suitable for transfer under CERCLA, CERFA parcels were further defined as belonging to one of seven categories as follows:

- ***Category 1: Areas where no storage, release, or disposal has occurred.*** Much of FMC is classified as Category 1. This category includes areas where no release, storage, or disposal of hazardous materials or petroleum products has occurred, including no migration of these substances from adjacent areas. Undeveloped areas, recreational areas, training facilities, and living quarters are assigned to Category 1.

  CERFA Category 1 qualified parcels are those parcels that were identified as having no evidence of CERCLA-related hazardous substances or petroleum product storage, release, or disposal, but do contain other environmental or safety concerns. These concerns include asbestos, LBP, PCBs, radon, radionuclides/ radiological issues, and UXO. Approximately 17,705 acres of Category 1 property were identified on the Main Post. Choccolocco Corridor contains approximately 4,539 acres of Category 1 property.

- ***Category 2: Areas where only release or disposal of petroleum products has occurred.*** Category 2 is defined as areas where only release or disposal of petroleum products has occurred. There is no property identified as Category 2 within the Main Post.

- ***Category 3: Areas where storage, release or disposal, and/or migration has occurred, but require no remedial action.*** Category 3 sites are those areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, but at concentrations that do not require removal action or remedial action. There are 480.6 acres assigned a Category 3 within the Main Post. Approximately 10.8 Category 3 acres were identified within Choccolocco Corridor.

- ***Category 4: Areas where storage, release or disposal, and/or migration has occurred, and all remedial actions have been taken.*** This category includes areas where storage, release, disposal, and/or migration of hazardous substances has occurred, and all remedial actions necessary to protect human health and the environment have been taken. There are 4.2 acres assigned a Category 4 designation within Main Post.

- ***Category 5: Areas where storage, release or disposal, and/or migration has occurred, response actions are underway but not completed.*** Category 5 sites consist of areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred, and removal and/or remedial action are underway but are not final. The total acreage of Category 5 areas at the Main Post is 59.2 acres.

- ***Category 6: Areas where storage, release or disposal, and/or migration has occurred, response actions not yet implemented.*** Category 6 sites consist of areas where storage, release, disposal, and/or migration of hazardous substances or petroleum products has occurred but required response actions have not been implemented. The total acreage of Category 6 areas at the Main Post is 199.5 acres.

- ***Category 7: Unevaluated areas or areas requiring additional evaluation.*** Category 7 includes any area where environmental contamination was considered possible but where insufficient information was available to more definitively classify the area. The total acreage of all Category 7 areas at the Main Post is 188 acres.

Figure 3-8 shows CERFA parcels.

3.4.2 Non-CERCLA Parcels with Qualifiers

Non-CERCLA parcels with qualifiers are those properties where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed but the sites were potentially impacted by radon, LBP, asbestos-containing materials, PCBs, radiological materials, or UXO (Figure 3-2).

3.4.3 Regulatory Conditional Concurrence of CERFA Report

Pursuant to CERCLA Section 120(4)(A), the U.S. Army requested that the EPA Region IV and the State of Alabama concur on the U.S. Army's uncontaminated (CERFA Parcel) determination for FMC. The EPA Region IV and ADEM reviewed the final CERFA report dated January 1998. The regulatory concurrence response letters are provided in Appendix D.

3.4.4 Suitability of Installation Property for Transfer by Deed

BCP guidance makes it clear that only parcels assigned CERFA Categories 1 through 4 are suitable to transfer by deed. Parcels assigned to Categories 5 through 7 are presently unsuitable for transfer by deed, although they may be suitable for lease under certain conditions. The majority of the Main Post's cantonment area falls into Categories 1 through 4; however, large portions of the Main Post were once, or are currently, within the surface danger zone of ranges. These ranges are considered unsuitable for transfer until assessment and/or site cleanup is accomplished. Figure 3-1 identifies acreage within the Main Post and Choccolocco Corridor. Figures 3-2 and 3-8 provide more specific information regarding potential environmental issues at each parcel.

Areas assigned to Categories 1 through 4 constitute 18,189.9 acres within the Main Post.

A total of 446.7 acres fall into Categories 5 through 7. Ranges and Category 5 through 7 parcels require additional investigation and/or clean up prior to disposal.

All estimates of acreage were based on geographic information system calculations and current records and are subject to inaccuracies inherent with the quality of the data from which maps and calculations were made.

3.5 Emergency Planning and Community Right-to-Know Act Reporting Requirements

FMC completed the Emergency Planning and Community Right-to-Know Act filing prior to installation closure and continues to file Toxic Release Inventory reports to EPA and ADEM.

3.6 Status of Community Involvement

A Community Relations Plan (CRP) has been prepared for FMC to facilitate effective communication and timely information exchange between various U.S. Army, federal, state, county, city, and township agencies, community organizations, and the general public. The CRP (SAIC, 1997a) outlines a site-specific program for establishing and maintaining community involvement in the decision-making process for ongoing actions associated with the DOD's BRAC environmental activities.

3.6.1 Restoration Advisory Board (RAB)

The FMC RAB, established in May 1996 to facilitate public involvement, is composed of members of the interested public and constitutes a representative cross section of the general public. The RAB is one vehicle through which FMC can keep the public informed on cleanup and closure issues and allows public input into the BRAC process. The RAB meets monthly to review progress of environmental restoration activities and to consult with the U.S. Army in an advisory capacity. The Army has presented programs to the RAB covering various topics, including investigations for OE and chemical warfare materiel, the EE/CA process, investigation and groundwater monitoring for Landfill No. 3, the Land Use Control Assurance Plan and Land Use Control Implementation Plans, progress on investigation and cleanup of the Eastern Bypass route, and risk management associated with unexploded ordnance investigations.

3.6.2 Fact Sheets/Newsletter/Web Site

Various fact sheets regarding environmental restoration activities and natural and archaeological resource issues are produced by FMC. These fact sheets and periodic newsletters are available

through the Environmental Office and on the FMC DOE web site: www.mcclellan.army.mil/env/index.htm under Public Documents. The web site is updated periodically with current information about FMC and its environmental cleanup program.

3.6.3 Information Repository and Administrative Record File

FMC has established information repositories at the Anniston Public Library and at the Houston Cole Library at Jacksonville State University. The FMC Environmental Office maintains the Administrative Record. The Administrative Record is a file that contains all information used by the lead agency to make its site-management decisions on the selection of a response action under CERCLA. The addresses, telephone numbers, and hours of operation for the information repositories are presented in Table 3-14.

3.6.4 Public Notices and Public Meetings

Public notices are made in accordance with the applicable regulations for cleanups. Public meetings are held when required to address public concerns or to allow additional public input. Public participation in the monthly RAB is encouraged.

3.6.5 Mailing List

A mailing list of all parties in the community interested in the disposal and reuse planning is maintained by the FMC Environmental Office and is updated regularly.

4.0 Installation-Wide Strategy for Environmental Restoration

This chapter describes the strategy for installation-wide environmental restoration programs at FMC. Prior to the official announcement of installation closure in 1995, restoration projects were underway to identify, characterize, and remediate environmental contamination at FMC. The restoration strategy implemented during this period focused on protection of human health and the environment at FMC, with consideration of ongoing and continued use of the properties by the U.S. Army. With the BRAC realignment announcement, the installation's strategy for the BRAC property shifted from supporting an active U.S. Army mission to responding to disposal and reuse considerations. The strategy included the completion of an environmental baseline survey, which documented the current environmental condition of each site and evaluated adjacent properties. A CERFA report was also completed.

The following sections describe various elements of the BRAC environmental restoration strategy, including the preferred land use plan, early action strategy, remedy selection approach, and compliance strategy.

Land at FMC has been delineated based on the projected reuse scenario. The FMC BCT determined that land reuse parcel boundaries, as defined in the LRA Comprehensive Reuse Plan and as identified by the priorities the JPA provides to the US Army on a monthly basis, make reasonable boundaries. Figure 4-1 shows land use boundaries at FMC. Investigative work at each area was prioritized in accordance with the anticipated schedule for transfer and JPA priorities. By designating these priority areas in this way, it is expected that property transfer will proceed more quickly and efficiently.

SIs and RIs at FMC have been comprehensive. However, in the event that new sites are discovered, they will be assessed and prioritized appropriately to determine the type of remediation, if any, that needs to be completed. The specific goals for BRAC program work in 2001-2002 are to:

- Continue with SIs and RIs,
- Conduct removal actions at small arms ranges: Iron Mountain Road (Ranges 12, 13, 19, and Skeet Range), Bains Gap Road (Ranges 21, 22, 23, and 27), and Baby Bains (Ranges 20, 25, and 26),
- Implement remedies for fill areas as agreed through the fill area EE/CA process,

- Implement ordnance clearance activities as determined through the ordnance EE/CA process, and

- Implement CWM actions as determined through the CWM EE/CA process.

The BCT has developed a prioritization plan for site cleanup at FMC based on input from the LRA and by assessing candidate sites according to waste characteristics, potential migration pathways, and potential receptors.

It is anticipated that the sequencing of work will proceed in accordance with the schedule presented in Chapter 5.0 of this BCP. This schedule may change based on SIs and RIs findings and early action strategies.

4.1 Strategy for Environmental Restoration

The installation-wide strategy for environmental restoration centers around disposal of properties quickly and efficiently. This includes developing early action strategies, specifically early removal actions, and implementing fast-track environmental cleanup strategies.

Under the Base Realignment and Closure Act (BRAC), the DOD established guidelines for the formation of FMC's BCT. The BCT is intended to act as the primary forum to address issues affecting the execution of base cleanup for the purpose of facility reuse. According to DOD guidelines, the BCT is responsible for developing risk management assessments and recommendations to complete clean-up and disposal of military property. In 1993, the President, through EO 12580, provided a 5-point Base Closure Plan that included recommended protocols for addressing these activities. Under the BRAC process, former installations are required to follow applicable statutes, regulations and authorities such as CERCLA, RCRA, NEPA, NCP, CERFA, and DERP. Thus FMC's remedial and property transfer activities are to be in accordance with the CERCLA process.

To carry out its BRAC mission, the FTMC BCT has established a decision-making process, and has expressed its objectives through Mission and Goals Statements. The FMC BCT has agreed to use a consensus decision-making process that includes evaluation of site information and analytical data. The BCT evaluates site information and data by conducting baseline risk screening against established site-specific risk screening values to which ADEM and EPA have concurred. If the BCT determines that evaluation beyond baseline screening is necessary, then the BCT performs further site-specific risk assessments to evaluate risks to human health and the

environment. In developing risk management decisions, the BCT exercises professional judgement based on site information, knowledge, and collective experience.

In accordance with BRAC, the FMC BCT has identified and assigned CERFA categories to all properties on the installation that will be transferred. Since 1995, the BCT has been actively engaged in the environmental assessment of all properties bearing CERFA parcel category designations 5 through 7 (Section 3.4.1 defines CERFA categories. CERFA Category 1 parcels do not require assessment; there are no Category 2 parcels on Ft. McClellan; and Categories 3 and 4 parcels have already been assessed). The BCT investigation procedures follow CERCLA protocols and are documented in Ft. McClellan's 5-volume Installation-Wide Work Plan, (Latest version dated March, 2000).

In the BCT's parcel evaluation process, it first collects all known documentation and operational information about each parcel. Fort McClellan and its contractors review photographic information, historical documentation, site-specific physical conditions of the property, and any other relevant information about the property. Fort McClellan and its contractor perform a physical inspection of the parcel to identify optimal sample locations and to document physical and geologic features on maps. This information is compiled in work plans that propose sample numbers, locations, and analytical parameters for each media to be sampled. The BCT, along with each agency's technical support resources, review the proposed work plans and provide appropriate suggestions and clarifications. The installation's BRAC team prepares all workplans reports and decision documents and makes appropriate revisions to such documents prior to submittal to the regulatory agencies. FMC BRAC Environmental Coordinator provides approval for the contractor to commence work at the sites.

The contractors execute all approved site-specific work plans and report results to the BCT. Laboratory analytical data are screened against site specific screening levels approved by EPA and ADEM. These values are compiled in the *Human Health and Ecological Screening Values and PAH Background Summary Report* dated July 2000, as amended August 2001. This compilation document includes human health site-specific screening levels (SSSLs), ecological screening values (ESVs), background metals values, background PAH values, and perchlorate screening levels. The BCT assumes that all site characterization data indicating levels that are less than the established screening values are either naturally occurring background conditions, and/or pose no significant threat to either human health or the environment. The BCT discusses and evaluates all site data values that exceed screening values. Based on discussions, and using their collective professional judgement, knowledge, and experience, the BCT may make

recommendations regarding parcels where parameters are present at levels above SSSLs. Some of the factors that the BCT considers in its data assessment and development of site recommendations include: the nature and level of the substance relative to background values; the statistical frequency and location of detection; historical Army operations at the site; future use scenarios for the site; and the existence of a drinking water standard for the substances detected.

When the investigation phase is deemed to be completed, some of the parcels may be judged to present no significant threat to human health or the environment, and a recommendation may be made to release the parcel for transfer by the Army without restrictions on future reuse. The BCT may also request further assessment (i.e., additional analytical data) of the parcels or it may recommend additional risk assessment activities before making a final decision regarding release of the property. The BCT may also decide that "hot spot" or interim source removals may be warranted before the Army transfers the property. In some cases, the BCT may recommend that appropriate land use controls be imposed to adequately manage risk during future reuse of the property after transfer. In all cases, the BCT's goal is to assure adequate protection of human health and the environment while still accomplishing the BRAC mission to transfer properties expeditiously and cost-effectively. The decision-making process the BCT uses provides the necessary degree of conservatism as well as the flexibility necessary to achieve the DOD's objective of expedited cleanup, facility reuse and redevelopment. Figure 4-2 provides a flow diagram that describes the BCT's decision-making process.

4.1.1 Early Action Strategies

The BCT has developed the following early action strategies to expedite the BRAC program at FMC: use of removal actions to address sites posing imminent risk, interim remedial actions, non-time-critical removals, and early involvement by the remedial action contractor.

Several early actions and interim actions have been completed at FMC in order to reduce or eliminate potential contamination at the installation. These actions include petroleum-contaminated soil removals and tank removals related to UST management, PCB transformer removal, cleanup of the Hot Cell, removal of OE scrap and cleanup of UXO along parts of the Eastern Bypass and M2 Area, and removal of indoor pistol ranges.

Several sites are undergoing SIs and RIs. The necessity and usefulness of early or interim actions for the sites cannot be determined until these investigations are completed.

4.1.2 Fast-Track Environmental Cleanup Strategies

The BCT is dedicated to implementing strategies for fast-track environmental cleanup. These strategies aid in transferring property more quickly. Fast-track environmental strategies will be continually modified and updated to reflect problems or opportunities as they develop.

Strategies developed to date impact four aspects of the cleanup process being pursued by the BCT as outlined below.

1. ***Compress Schedule.*** Time-critical and non-time-critical removal actions will be conducted whenever possible.

2. ***Improve Communication.*** The BCT will use partnering principles to improve communication and reduce inefficiency in the BRAC process.

3. ***Eliminate Redundant Actions.*** Enhanced communication, agreement among all parties, and clearly defined plans will eliminate redundant investigation and cleanup activities.

4. ***Increase Concurrent Activities.*** Whenever possible, multiple activities will be conducted concurrently to compress the schedule and to increase efficiency.

The BCT has identified and removed pistol ranges that were previously located in the attics of Buildings 141 and 143 as fast-track sites (non-CERCLA issues 16Q-X and 217Q-X, respectively). The BCT will identify other fast-track sites as BRAC work progresses.

4.1.3 Remedy Selection Approach

The Army will identify remedial alternatives for the various types of environmental issues identified at FMC and will evaluate the alternatives according to their effectiveness, implementability, and cost. Effectiveness addresses overall protection of public health and the environment, compliance with ARARs, long-term effectiveness and permanence, and short-term effectiveness. Implementability includes technical feasibility, available services and materials, state acceptance, and community acceptance. Cost includes capital costs, annual costs, engineering fees, contingency fees, and overhead and profit.

The Army will use results of the alternatives evaluations to identify the most appropriate remedial alternative for each site. Particular attention will be given to the following during the evaluation of alternatives:

- ***ARARs.*** Applicable requirements for anticipated remedial actions will be identified during the initial screening of alternatives. 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. Action-specific and location-specific ARARs will also be identified and evaluated. The BCT will consider waivers where treatment to standards is technically impractical.

- ***Future Land Use/Risk Assessment.*** The reuse of any parcel of land defines the required level of remediation. Risk assessment exposure scenarios will be developed during the RI which are consistent with reuse of the installation as proposed in the Comprehensive Reuse Plan.

- ***Applicable Remedies.*** The presumptive remedy selection approach will be applied in selected cases. Focused feasibility studies will be developed where appropriate.

- ***POL Remedies.*** Source-specific actions for petroleum, oils, and lubricant (POL) will be addressed under the ADEM UST program. UST program protocols related to completion of site assessment, development, regulatory review, and acceptance will be utilized.

4.2 Compliance Strategy

The following sections provide a detailed description of remedial strategies for individual environmental programs to ensure that the installation is in compliance with federal and state regulatory programs, DOD and U.S. Army directives and regulations throughout the BRAC realignment and property disposal process. A detailed description of the strategies and schedules for individual compliance programs is provided in the following sections.

4.2.1 Unexploded Ordnance (UXO)

An inventory of all identified ranges known to contain or suspected to contain UXO within the Main Post and Choccolocco Corridor is presented in Table 3-3. The presence of UXO could present a hazard to reuse activities such as construction, intrusive investigation of hazardous waste site contamination, and most types of agriculture or silviculture operations. If the UXO is not removed, restrictive covenants will be placed into transfer or conveyance documents to prohibit future owners from terrain-disruptive activities and to impose other requirements to ensure safety and protection of human health and the environment. The level of restrictive covenants will be determined following the EE/CA for OE, which includes public participation and allows the community's concerns and priorities to be addressed.

UXO response activities consist of the location, identification, removal, and destruction of ordnance items. Six EE/CAs to investigate the nature and extent of UXO/OE contamination and

to evaluate possible UXO/OE risk reduction and removal action alternatives in accordance with the applicable regulations are being conducted at FMC. Four EE/CAs are currently underway for four UXO areas (M1.01, Alpha, Bravo, and Charlie). Field investigation efforts began at the installation in March 2001 and are expected to be completed by April 2002. Two EE/CAs for UXO areas M2 Parcel and the Eastern Bypass slated for accelerated response and release have already been completed. All contaminants other than CWM will be handled as HTRW issues and will be investigated under CERCLA regulations.

4.2.2 Chemical Warfare Materiel (CWM)

The U.S. Army Engineering and Support Center, Huntsville, is preparing an EE/CA for CWM at the installation. The EE/CA will address the investigation of the nature and extent of CWM contamination and removal action alternatives. Intrusive fieldwork to investigate potential CWM sites began April 24, 2001, and was completed on July 10, 2001. As of this writing, no CWM has been found. The results of the findings will be documented in the CWM EE/CA report. All contaminants other than CWM will be handled as HTRW issues and will be investigated under CERCLA regulations.

4.2.3 Radiation

The radiological management program is currently the responsibility of a TRADOC FMC-transition force.

NRC Decommissioning. License No. 01-02861-05 will be terminated upon completion of decommissioning activities at Rideout Field. Completion of decommissioning fieldwork at Rideout Field is anticipated in August 2001.

4.2.4 Radon

DOD policy is not to perform radon assessment and mitigation prior to transfer of BRAC property unless otherwise required by law. Relevant radon assessment data pertaining to FMC will be included in the property transfer documents.

4.2.5 Storage Tanks

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

USTs. FMC proposes to transfer 48 active tanks at 30 UST parcels "as is" in conjunction with the transfer of associated properties.

ASTs. A total of 47 ASTs are on the inventory at FMC. After closure of the installation, the tank management program became the responsibility of a TRADOC transition force. FMC will transfer active ASTs in conjunction with the transfer of associated properties. The Army will remove any product in ASTs prior to transfer.

4.2.6 Polychlorinated Biphenyls (PCB)

The Army transferred ownership of the electrical distribution system to Alabama Power Company in September 1999. The Transition Force no longer manages a PCB program at FMC. Sites where transformers were staged on the installation are under investigation in the BRAC program.

The Army will include in transfer or conveyance documents a notice regarding the potential for fluorescent light ballasts that contain PCBs to exist on the property and a requirement to manage such ballasts in compliance with applicable laws.

4.2.7 Herbicides and Pesticides

Areas suspected of pesticide contamination are being investigated under the BRAC program.

The Army will include in transfer or conveyance documents a notice that pesticides may be present on the property and a requirement to manage any such property in compliance with applicable laws.

4.2.8 Asbestos

The Army will include a notice in a transfer or other conveyance document if asbestos is present on the property and will require the new owner and his successors or assigns, prior to use or occupancy of the buildings, to remediate any friable asbestos or demolish the building or portions of the building that contain the friable asbestos and to dispose of ACM in compliance with applicable laws and regulations. The deed will require the new owner to assume responsibility for the management of any ACM in compliance with applicable laws.

DOD policy will be followed when implementing strategies for asbestos abatement. FMC will provide information on the existence, extent, and condition of ACM to the transferee that includes:

- Health risk evaluation,
- Testing results,
- Control measures taken, if any,

- Available information on cost of removing ACM, and
- Latest inventory information.

4.2.9 Lead-Based Paint (LBP)

Fort McClellan managed LBP according to DA policy guidance "Lead-Based Paint and Asbestos in U.S. Army Properties Affected by Base Realignment and Closure" and DOD memorandum entitled "Asbestos, Lead Paint and Radon Policies at BRAC Properties, " dated October 31, 1994.

The Army will include in transfer or conveyance documents a notice of the presence of LBP and will require the new owner not to use the property for residential purposes where property contains or is presumed to contain LBP. The notice also describes conditions required under the law for managing and abating LBP.

A comprehensive survey of lead in soil has not been conducted at the installation. However, limited soil sampling in the vicinity of the buildings at the Base indicated soils with lead concentrations above the EPA standard of 400 mg/kg for residential soils at five of the buildings. The Army will notify prospective owners by deed or other transfer document of lead in soil in the vicinity these buildings.

4.2.10 Wastewater Discharge

After closure, a TRADOC transition force became responsible for oversight of the NPDES permit requirements for one remaining site, the active industrial landfill. Regularly scheduled effluent sampling programs continue to monitor the performance of the facility.

4.2.11 Air Emissions

The Army retained air permits for the petroleum, oil, and lubrication gasoline dispensing facility and Boiler Plant No. 2.

4.2.12 Oil/Water Separator

SIs are currently taking place or have been completed at the facilities prior to transfer to confirm that operations did not contaminate the surrounding environment. If contamination is found, appropriate remedial actions will be implemented prior to property transfer.

4.2.13 National Environmental Policy Act (NEPA)

The final EIS addressing the environmental and socioeconomic impacts of the disposal and reuse of the property at FMC, including foreseeable reuse alternatives, was submitted to the BCT team in August 1998. A ROD was signed in June 1999.

4.2.14 RCRA Facility: OB/OD

At this writing, FMC DOE is in the initial stages of closure of the OB/OD Area under RCRA. Field work began July 23, 2001, for site characterization. A closure plan will be generated upon completion of field work.

4.2.15 Hazardous Waste Management

The FMC Transition Force will continue to conduct the hazardous waste management program at FMC according to applicable state and federal regulations. FMC has maintained its large quantity generator status and its EPA identification number and continues to operate a 90-day hazardous waste storage area in a portable hazardous materials building located in the Transition Force compound. The Transition Force will submit a biennial hazardous waste report for hazardous waste activities for the year 2001.

4.2.16 Solid Waste Management

FMC active industrial landfill continued to accept construction and demolition waste from the transition force, SI activities and ALARNG until October 1, 2001. The current solid waste permit expires November 2005. The only waste currently accepted by the industrial landfill is clean soil from SI and RI activities in accordance with ADEM Solid Waste Program requirements.

4.2.17 Medical Waste

There has been no regulated medical waste generated at FMC since closure of the Noble Army Hospital in September 1999.

4.2.18 Pollution Prevention Strategy

In the future, the Transition Force will file appropriate reports to the appropriate agencies if necessary.

4.2.19 Defense Environmental Restoration Program (DERP)

The Defense Environmental Restoration Program (DERP) was established in 1984 to promote and coordinate efforts for the evaluation and cleanup of contamination at DOD installations.

Since 1995, all work at sites within the Main Post is conducted using the BRAC program and BRAC funds. Previous DERP (IRP) sites in Pelham Range are being evaluated under the DERP program and will be managed by the National Guard Bureau upon transfer of the property.

4.2.20 Landfills/Fill Areas

Investigations of fill areas, including extensive sampling and geophysical investigations, were conducted to identify chemicals of potential concern, assess potential impact to soils, groundwater, and other media, and determine the vertical and horizontal extent of the fill areas. The investigations encompassed twelve fill areas on the installation, results are being documented through the fill area EE/CA and the Fill Area Definition report. In addition, extensive subsurface investigations for geological formations are currently ongoing for Landfill No. 3.

The Army will include in transfer or conveyance documents a notice when a landfill is present on the property and stipulations regarding the ownership of the landfill.

4.2.21 Ranges

All ranges within the Main Post ceased operation after closure of FMC. The BCT will assure that ranges are investigated for the presence of hazardous substances in soil, including lead, explosive residue, solvents, and other contaminants. Where contamination is found, ranges will be properly remediated prior to property transfer. Investigations are currently underway for small arms ranges (Iron Mountain Road, Bains Gap Road, and Baby Bains) and historical ranges. The ranges were geographically grouped based on similar known releases, operations, and contaminants and for easy cleanup. The removal action objectives for the ranges is to be consistent with the local reuse plan.

4.3 Natural and Cultural Resources Strategies

FMC will continue to conduct operations in accordance with Army Regulation 200-3 and its Integrated Natural Resource Management Plan (INRMP). Cultural resources identified in the INRMP will be preserved whenever possible during transfer and redevelopment. The Army will include in a deed or other transfer document appropriate preservation covenants as stipulated in the SHPO programmatic agreement. The Army will also include in a deed or other transfer document a notice when the endangered gray bat's foraging or roosting habitat is in the area and the requirements for managing that area.

One option for development of the Main Post calls for economic development of the cantonment area and reserving approximately 7,600 acres outside the cantonment area for a national wildlife refuge. This will be a transfer of property within the federal government (Fed to Fed transfer), in which the USFWS will hold title to the property and will control certain management programs.

4.4 CERFA Parcels

The BCT tracks changes to the CERFA category designation of each parcel. Some sites are found after initial screening to require no further action and, depending on past site history, they are reclassified to Category 3 (areas where release, disposal, and/or migration of a hazardous substance has occurred, but at concentrations that do not require a removal or remedial response). Other parcels, found to be contaminated, are reclassified to Category 6 (requiring cleanup). Parcels undergoing remediation will be reclassified after remediation is initiated, and again when it is completed. Table 4-1 presents a parcel reclassification tracking summary. Tables 3-1 and 3-2 present summaries of the environmental condition of property within the Main Post and Choccolocco Corridor for CERFA and non-CERCLA parcels, respectively.

A list of all buildings within FMC is presented in Appendix D. Each building is identified by a unique number designation. The Main Post is divided into sectors, with all buildings within a sector having a specific range of numbers. For instance, all "3200" buildings (Buildings 3200 through 3299) are located within a specific area. The BCT will use this information to assure that all buildings are addressed before transfer.

4.5 Emergency Planning and Community Right-to-Know Act (EPCRA)

The Emergency Planning and Community Right-to-Know Act filing will be updated annually to accurately reflect the types and quantities of CERCLA hazardous substances present at the facility.

4.6 Community Involvement/Strategy

The Army will continue its community involvement under the guidance of the CRP. The RAB will continue meeting regularly and provide input to the BCT. Additional fact sheets and newsletters will be published as required during implementation of the BRAC program, and information repositories will be maintained. Public meetings will be held when required to address public concerns or to allow additional public input.

5.0 Environmental Program Master Schedules

5.1 Environmental Restoration Program Schedules

The schedules provided in Figures 5-1 and 5-2 are based on timelines estimated for each individual parcel. In order to accelerate the environmental restoration process, scheduling strategies and timelines are prepared by the BCT and project team so that all involved parties, including regulators, can provide input to the process. These schedules will be reviewed regularly by the BCT to ensure that they are current, that activities are expedited whenever possible, that reuse goals continue to be met, and that ongoing activities are not disrupted.

5.2 Natural and Cultural Resources

A schedule of natural and cultural resources activities and fiscal year requirements for FMC Natural and Cultural Resource Programs is contained in the Integrated Natural Resources Management Plan.

5.3 BCT/Project Team/RAB Meeting Schedules

BCT meetings are held on a monthly basis. The BCT requests input from the Project Team and other experts as needed and establishes agenda items based on the immediate and anticipated needs of the BCT and Project Team. The BCT also keeps minutes of their meetings. RAB meetings are held the third Monday of each month. BCT meetings are coordinated with the RAB meetings.

6.0 Technical and Other Issues to be Resolved

This chapter summarizes technical and other issues associated with FMC. The issues include information management; the usability of historical data; data gaps; natural (background) concentrations of elements and compounds in soil, ground water, surface water, and sediment; risk assessment; cleanup standards; and program initiatives to complete cleanup requirements as required to meet property transfer schedules.

6.1 Information Management

This section summarizes issues pertaining to managing information gathered and used in the environmental restoration program, including:

- Improving coordination of, access to, and management of environmental restoration and real estate-type data generated at FMC,
- Requiring all contractors to submit data and reports in electronic format that can be used by the U.S. Army, EPA, and ADEM, and
- Establishing methods/procedures to distribute data and reports to all involved parties associated with FMC environmental restoration program (e.g., EPA, ADEM, Real Property Contractors).

Loading data into environmental information systems in order to provide effective management of data. All previous data generated by FMC has been loaded into a central database. Environmental condition of property and property suitable for transfer maps generated for this BCP are generated using a database-driven, Geographic Information System (GIS).

6.1.1 BCT Action Items

The BCT has recognized and taken action at FMC to ensure that data are effectively managed and available to all parties with need for installation-wide and BRAC-specific perspective on activities at FMC. In addition, the BCT has required that all future contracts include provisions for submittal of data and reports in both hard copy and electronic formats.

6.1.2 Rationale

As the installation proceeds through cleanup and property disposal, the BCT recognizes the importance of capturing all information in a permanent and readily available format. The establishment and maintenance of a database of sampling and analysis data and spatial data (e.g., real estate maps) are the most efficient methods of sharing these data among parties.

6.1.3 Status/Strategy

The BCT is addressing the issue of maximizing the accessibility of data to all interested parties in the following manner:

- All historical data generated at FMC are available in the installation Administrative Records and are entered into the central database.
- All new sampling and analysis data generated during investigations are entered into the centralized database. The U.S. Army, ADEM, EPA and National Guard Bureau have been provided with access to the data.
- Necessary contract modifications will be made by the U.S. Army to ensure that data and reports from ongoing efforts are submitted electronically to the U.S. Army, ADEM, and EPA and other interested agencies.
- The work that is being conducted at FMC will be portrayed to the public through briefings using GIS data.

6.2 Data Usability

This section summarizes issues pertaining to the validity of using historical data sets in the BRAC environmental restoration program.

6.2.1 BCT Action Items

There are no action items, because all historical data was already reviewed during past field investigations.

6.2.2 Rationale

Historical analytical data can contribute to the completion of site characterizations and risk assessments by filling data gaps. Current and future data from each data collection system (e.g., field laboratories and field screening techniques) are critical to the completion of all site characterization efforts, comprehensive conceptual model development, risk assessments, and ultimately the selection of remedial actions to protect human health and the environment.

6.2.3 Status/Strategy

A summary of the current status and strategy for ensuring data usability during the FMC BRAC program and property disposal process is provided below:

- Historical data will only be used if there are data gaps in the data that is currently being collected during field work.

- Existing historical documents have been reviewed and data validated through historical record investigations, including RIs. The BCT will continue to evaluate historical data as it becomes available to ensure its accuracy.

- Sampling and analysis data from investigations are collected, processed, and managed in accordance with the installation-wide quality assurance project plan (QAPP). The QAPP has been approved by the regulatory agencies to ensure the validity of the data collected during investigations. The data are also entered into the FMC database.

- Data will continue to be generated and disseminated in a manner that will provide usability and data sharing for those involved in the environmental restoration program at FMC.

6.3 Data Gaps

This section summarizes issues pertaining to the determination and collection of data needed to complete the FMC Environmental Restoration Program.

6.3.1 BCT Action Items

The following BCT action items should be addressed at FMC in order to identify and fill data gaps and continue the BRAC environmental restoration process:

- Data gaps are continually addressed for each investigation. In all investigation efforts, there is a need to set priorities and balance requests for additional field work with the need to conduct expedited remedial actions. The BCT has responsibility for review and approval of all work plans.

- An installation-wide streamlined human health and ecological risk assessment was completed in 1998. In addition, site-specific human health and ecological risk assessments were conducted and completed for each site.

- Perchlorate data was added as an addendum to the human health and ecological screening values and polyaromatic hydrocarbon (PAH) background summary report.

6.3.2 Rationale

Effective identification and filling of data gaps permits the development of comprehensive conceptual site models for risk assessment. Effective analysis of data gaps also facilitates the completion of investigative efforts so that appropriate remedial actions can be identified and evaluated. This information also facilitates the identification of clean areas at FMC.

6.3.3 Status/Strategy

Current strategy for addressing data gaps is that the BCT is involved throughout the entire process, including scoping and reviewing the work plans during BCT meetings. This coordination process will continue as an integral part of the execution of the FMC BRAC cleanup program leading to remedial actions.

6.4 Background Levels

This section summarizes issues pertaining to the development of background levels at FMC.

6.4.1 BCT Action Items

FMC completed an installation-wide background survey of metals in soil and groundwater in 1998 and of PAHs in surface soils in 2000. These data will be used to assist the BCT in determining appropriate risk-based cleanup levels in areas where metals may be naturally occurring in soils and/or groundwater.

6.4.2 Rationale

Background concentration values of elements in the soil, groundwater, surface water, and sediments need to be determined before risk assessments can be conducted. The installation-wide background survey of metals in soils and groundwater and PAHs in surface soil allowed for cost savings by cutting out redundancy of sampling.

6.4.3 Status/Strategy

Current strategy for addressing background values at FMC is for the BCT to use the completed background values for metals and PAHs, human health site-specific screening levels, and ecological screening values. The background levels are used to identify areas where past operations at FMC have introduced contamination into the soil and/or groundwater resulting in concentrations above those levels that occur naturally. The analytical data were compared against human health screening levels (HHSL) and ecological screening values (ESV) and inorganic background values to determine if the site posed a risk to human health and/or the environment; if so, then a human health and ecological risk assessment may be conducted. The BCT will then proceed to establish realistic cleanup goals.

6.5 Risk Assessment

This section summarizes unresolved issues pertaining to the completion of risk assessments required to complete the FMC environmental restoration programs. Human health risk

assessments and ecological risk assessments are necessary to identify the impacts of contaminants at FMC on current and future populations and biota at FMC.

6.5.1 BCT Action Items

The BCT has established risk-based cleanup criteria where practical and appropriate. Risk-based cleanup criteria are designed to be protective of human health and protective of ecological receptors. Risk-based criteria are determined based on the specific chemical compounds present, exposure pathways, and potential receptors. Anticipated or known land uses are considered in exposure assessment assumptions. The BCT action items for risk assessment are:

- Conduct a streamlined risk assessment to provide an estimate of current and future human health risk associated with hazardous substance releases at each site as appropriate. The risk assessment approach will follow the approach outlined in the Installation-Wide Work Plan (IT, 1998b).

- Conduct the ecological risk assessments to evaluate the potential adverse effects to the ecosystem at FMC as appropriate.

- Evaluate the role of anticipated land use as a criterion in selecting assumptions in human health exposure assessments conducted for the BRAC parcel.

6.5.2 Rationale

The risk assessments provide a tool for the risk managers to evaluate the need for remedial action on the basis of risk to current and future populations at FMC.

6.5.3 Status/Strategy

As sites go through the CERCLA process and upon completion of the investigations, sites will be screened in accordance with the site-specific screening levels (SSSL) guidance and as appropriate having the human health and ecological risk assessment.

6.6 Base-Wide Remedial Action Strategy

This section summarizes issues that pertain to the completion of base-wide remedial action (RA) strategy at FMC.

6.6.1 BCT Action Items

In order for the installation-wide restoration program to be completed at FMC, the following action items need to be addressed:

- Complete the appropriate CERCLA process for all the properties at FMC.
- Fill area strategy must be implemented.
- Range strategy must be implemented.
- Basewide risk assessment.

6.6.2 Rationale

The BCT will achieve economies of scale in remedial action costs if ranges and fill areas can be addressed in a comprehensive method rather than on an individual basis.

6.6.3 Status/Strategy

The interaction of multiple RAs will be considered during design and implementation, so that the most effective RAs will be executed.

6.7 Interim Monitoring of Groundwater and Surface Water

FMC has no issues associated with interim groundwater or surface water monitoring requirements.

6.8 Excavation of Contaminated Materials

This section summarizes issues that pertain to the excavation of contaminated materials as a RA.

6.8.1 BCT Action Items

The BCT will review results of all investigations and risk assessments to identify materials that must be excavated prior to property transfer. Investigations are scheduled or underway at each Category 5, 6, and 7 site identified in the EBS. As part of the small arms ranges EE/CA process, the BCT is evaluating the feasibility of excavation of contaminated soil as a remedial action alternative.

6.8.2 Rationale

Appropriate RAs will be conducted at each site, with excavation being one of the alternatives to be considered. Excavation and on-site treatment or off-site treatment/disposal can be a cost-effective method of remediating contamination that poses a threat to groundwater or may pose a direct threat to human health or the environment. Establishment of cleanup levels is critical to determine whether soil excavation will be cost effective.

6.8.3 Status/Strategy

Environmental restoration activities at FMC are in the investigative phase. As the BRAC cleanup program moves into the RA evaluation and design phases, excavation of contaminated material and on-site treatment and disposal will be considered, when applicable, as a potentially cost-effective RA alternative.

USTs were removed from several sites at the installation. Excavation of contaminated soils at the UST removal sites was conducted in most cases. Investigative activities are being conducted where required.

6.9 Protocols for Remedial Design Reviews

Environmental restoration activities at FMC are presently in the investigative phase. The rationale and strategy that will be employed at FMC when the BRAC program reaches the design phase are described in the sections below. Protocols for remedial design (RD) reviews will follow internal contractor quality control standards and procedures. RDs will also undergo reviews by appropriate federal and state regulatory agencies at different levels.

6.9.1 BCT Action Items

At this time, no BCT action items have been identified that relate to protocols for RD reviews.

6.9.2 Rationale

The review of RDs is critical to ensuring that they will achieve cleanup goals and that they are technically and administratively feasible. In addition, the solicitation of public comments on RDs through the RAB process can aid in the identification of community concerns that are outside technical and administrative criteria, so that they can be addressed before they impact the implementation of the RA.

6.9.3 Status/Strategy

RDs will be reviewed by the BCT members and Mobile District USACE staff engineers concurrently and must be approved by both the BCT and Mobile District, USACE.

6.10 Conceptual Models

This section summarizes issues pertaining to the development of conceptual site models for the FMC environmental restoration program.

6.10.1 BCT Action Items

The following action items related to the development of conceptual site models for FMC have been identified:

- All conceptual site models are reviewed to ensure that all reasonable exposure pathways for human health and ecological receptors have been addressed in investigation field efforts and risk assessments.

- All exposure pathway analyses and conceptual site models are developed for new sites.

6.10.2 Rationale

Conceptual site models identify potential contaminant sources, exposure routes, and receptor populations. The models provide a framework for understanding investigation data.

6.10.3 Status/Strategy

Conceptual models will be utilized during the performance of risk assessments to ensure that all exposure pathways and receptors are considered.

6.11 Cleanup Standards

This section summarizes issues pertaining to the establishment of cleanup standards.

6.11.1 BCT Action Items

Develop cleanup levels for chemicals of concern in soil and groundwater at each site. The BCT considers site-specific risk-based cleanup standards and ARARs during assessment and remediation at FMC.

6.11.2 Rationale

In the absence of federal or state mandated cleanup standards for hazardous wastes or constituents in soils, remediation criteria for contaminated soils are provided through site-specific risk assessments. Final remediation goals are developed based on the site-specific risks with consideration given to state regulations, e.g., protection of groundwater and use of best demonstrated available technology.

6.11.3 Status/Strategy

The BCT develops risk-based cleanup standards for each site based on contaminants of potential concern and anticipated land use considerations. These risk-based cleanup standards will be

protective of human health and the environment. The BCT anticipates that using risk-based cleanup standards will result in more rapid transfer of a larger acreage of property.

6.12 Initiatives for Accelerating Cleanup

This section summarizes issues pertaining to accelerated cleanup and lists key factors that are being used to accelerate cleanup.

6.12.1 BCT Action Items

There are no action items for the BCT at the time of this writing.

6.12.2 Rationale

It is desirable to initiate accelerated cleanup in order to promote early reuse of facilities and property at FMC.

6.12.3 Status and Strategy

The following initiatives were implemented by the Project Team to expedite response actions at the installation:

- Removal of indoor pistol ranges in attics of Buildings 141 and 143
- UST removals
- Buildings South of Reilly Airfield expedited SI
- M2 expedited SI and UXO clearance
- Risk-Based Cleanup-The BCT will develop risk-based cleanup standards based on future land use.
- Defined Document Review Process-The BCT will streamline the review process by agreeing to a real-time review process for a document requiring regulatory approach.
- Team Approach-A strong team is built, consisting of the BRAC Environmental Coordinator, USACE representatives, contractors, and federal and state regulatory personnel, that has the authority, responsibility, and accountability for implementing innovative solutions to remediate and close sites in a timely, cost-effective manner.
- Community Involvement-Involve the community during the remedial process to encourage support at the time of closure. By informing the community during the

process, the likelihood of opposing comments during the public comments period would be lessened.

- Generic Procedures-Develop generic procedures and scopes of work for common problems or types of contaminated sites (e.g., fuel contamination in soil). The procedures should be flexible enough for site-specific modifications to be made.

- Innovative Contracting-Maximize flexibility of contracting procedures, and investigate use of level-of-effort, direct cost reimbursement, award incentives, and other flexible contracting methods.

6.13 Remedial Actions

Most of the sites at FMC are currently undergoing investigative process. Remedial actions began in 1999.

6.13.1 BCT Action Items

- Four Pistol Ranges were removed, two each from the attics at Buildings 141 and 143. Upon completion of investigation and study and site-specific human and ecological risk assessments, the BCT will review each site to determine which sites require remedial action.

- M2 UXO removal was conducted

- BCT has an action item for non-time critical interim soil removal.

6.13.2 Rationale

Remedial actions will be conducted at those sites where risk-based cleanup criteria are exceeded for the anticipated land use. Investigation and remediation of sites will be scheduled to generally follow the phases of the Comprehensive Reuse Plan.

6.13.3 Status/Strategy

As decision documents are prepared and RD/RAs are initiated, the BCT will ensure that the technical issues that affect remedial actions are properly addressed.

6.14 Review of Selected Technologies for Application of Expedited Solutions

At this time, FMC is evaluating a number of remedial technologies through CERCLA and EE/CA processes.

6.14.1 BCT Action Items

The BCT will review and identify technologies appropriate to accomplish expedited remediation of sites upon completion of the investigative efforts.

6.14.2 Rationale

Evaluation of remedial technologies will include adequate protection of human health and the environment in addition to promoting early reuse.

6.14.3 Status/Strategy

At the present time, environmental investigations are ongoing at FMC. If these investigations indicate that the need exists for remediation, remedial technologies that are capable of meeting cleanup standards and are technically and administratively feasible will be identified. The time required to achieve cleanup standards will be considered during selection of remedial technologies. Implementation of the selected technologies will be expedited as much as possible and will be incorporated into the Base-wide remedial action strategy.

6.15 Hot Spot Removals

Hot spots are locations where the level of contamination requires an immediate action to mitigate risk.

6.15.1 BCT Action Items

No BCT action items have been identified in relationship to hot spot removals.

6.15.2 Rationale

Hot spot removal may accelerate required cleanup efforts and facilitate property transfer by removing contaminants that may constitute an immediate risk to human health and the environment.

6.15.3 Status/Strategy

In the event that investigative data indicate that there exists a need for immediate hot spot removal in order to protect human health and the environment, the BCT will evaluate the situation and make decisions as to the best strategy for removal.

6.16 Identification of Clean Properties

Clean properties at FMC (CERFA Category 1 parcels) were identified during the environmental baseline survey. Subsequent investigation efforts have also identified a number of parcels for unrestricted reuse.

6.16.1 BCT Action Items

As areas at FMC are remediated, thus BCP and associated maps of the environmental conditions of property and property suitable for transfer will be updated to reflect the changes. Similarly, if additional contamination is identified at the installation during investigative activities, appropriate modifications to documents and maps will be made.

6.16.2 Rationale

Clean areas need to be identified prior to transfer by the U.S. Army to the LRA or other end user.

6.16.3 Status/Strategy

The Main Post consists of 18,200.6 acres of clean parcels under CERFA (Categories 1 through 4). Maps of the environmental condition of properties were generated and are presented as Figures 3-2 and 3-8. SIs have resulted in reclassification of some of the parcels at FMC (from Categories 6 and 7 to Categories 3 and 4).

6.17 Overlapping Phases of the Cleanup Process

FMC is in the process of performing OE clearances and HTRW remedial actions that will overlap geographically and must be closely coordinated by the U.S. Army.

6.17.1 BCT Action Items

The BCT will have to decide schedule priorities for cleanup where OE clearances and HTRW cleanups overlap geographically.

6.17.2 Rationale

OE clearance involves very large exclusion zones that preclude the presence of other activities in those areas.

6.17.3 Status/Strategy

The BCT will keep apprised of the OE clearance and HTRW cleanup schedule and develop a work-around when conflicts occur. The FMC meet appropriate personnel (CDTF, Alabama Department of Transportation contractors, transition force) weekly to coordinate near term field activities and resolve potential scheduling conflicts.

6.18 Improved Contracting Procedures

The current contracting strategy for FMC is to use the most appropriate contracting vehicles available through USACE. FMC anticipates accomplishing HTRW cleanup through the TERC using IT Corporation. Huntsville USACE used innovative contracting methods to establish a multi-year contract for OE response that allows for working through all phases of the OE process. The U.S. Army believes that this contract strategy allows the most contracting flexibility and the best value to the taxpayer. FMC anticipates accomplishing UXO cleanup through the contractor, Foster Wheeler Environmental Corporation.

6.19 Interfacing with the Comprehensive Reuse Plan

Interfacing with a Comprehensive Reuse Plan is desirable to expedite implementation of RAs and identification and transfer of parcels to the community. This section identifies issues that need to be resolved relative to this process.

6.19.1 BCT Action Items

The BCT will continue to communicate with the JPA to identify transfer priorities and accomplish cleanups compatible with the Comprehensive Reuse Plan.

6.19.2 Rationale

In order to expedite property transfers, community reuse goals, appropriate levels of remediation, and cleanup standards must be identified.

6.19.3 Status/Strategy

A Comprehensive Reuse Plan that outlines the plans for future reuse of the FMC parcels was published in 1997. The BCT and the JPA are actively working together to transfer property in the most efficient manner possible. Information contained in the Comprehensive Reuse Plan was used when developing the schedules presented in Chapter 5.0.

6.20 Bias for Cleanup Instead of Studies

Where applicable, the BCT will promote implementation of remedial alternatives in lieu of lengthy studies. This approach will expedite early achievement of cleanup goals and transfer of property.

6.20.1 BCT Action Items

The BCT will make every effort to implement any necessary remedial technologies as soon as possible to facilitate transfer of property. This will be accomplished through the focused onboard reviews and consensus decision making.

6.20.2 Rationale

Early implementation of remedial alternatives will reduce the need for additional studies of contaminated sites and will accelerate completion of cleanup activities. This in turn will facilitate property transfer efforts.

6.20.3 Status/Strategy

Where applicable, the BCT will promote cleanup instead of studies. As the first step in this process, the BCT developed

- SSSLs
- ESVs
- Background values and PAH values
- Perchlorates values.

To expedite screening of parcels during the investigation phase, Basewide work plans were also developed to minimize work planning for individual sites.

6.21 Expert Input on Contamination and Potential Remedial Actions

The BCT is using contractors to investigate sites, determine risk-based cleanup criteria, screen sites against those risk-based cleanup criteria, evaluate applicable remedial alternatives, and propose the best remedial alternative on a site-by-site basis.

6.21.1 BCT Action Items

There are no BCT action items with regard to obtaining expert input on contamination and potential RAs for the FMC parcels.

6.21.2 Rationale

The use of experts in the FMC BRAC program can reduce the time it takes to reach target cleanup levels and allow for intended use.

6.21.3 Status/Strategy

The BCT is currently utilizing the ADEM, EPA, USACE, U.S. CHPPM, and contractors to ensure that the proper technical personnel are used to evaluate contamination and potential RAs at FMC. Some of these resources are identified as project team members in Table 1-1 of this BCP. The BCT will continue to utilize these personnel and will solicit input from other sources as necessary to ensure that effective RAs are completed at FMC.

6.22 Presumptive Remedies

The EPA has issued guidance on "generic" or presumptive remedies for a few specific contamination scenarios, e.g., one of the generic remedies for vadose-zone volatile organic compound contamination is soil vapor extraction. Some of these generic remedies may be applicable to FMC if contamination scenarios are similar to those in the generic remedy guidance.

6.22.1 BCT Action Items

Whenever applicable, the BCT will consider generic remedies as BRAC work progresses to expedite implementation of installation's RA strategy.

6.22.2 Rationale

Use of generic remedies may expedite implementation of cleanup technologies and streamline the documentation of decision-making steps for RAs at FMC.

6.22.3 Status/Strategy

At this writing, no generic remedies have been identified at the installation. However, the BCT will continue to consider presumptive remedies as the BRAC work progresses.

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

The FMC BCT is committed to conducting work supporting expeditious transfer of property in the most efficient manner possible. The BCT has been using partnering techniques (innovative management, coordination, and communication techniques) since 1995. Partnering has kept the members involved in the process of environmental restoration efforts, expedited document review, and addressing of potential concerns at early stages, therefore speeding the transfer process.

6.23.1 BCT Action Items

At the present time, the BCT continues to foster partnerships with regulatory agencies and the public through scheduled BCT, Project Team, RAB, and onboard review meetings and the document review process.

6.23.2 Rationale

Close cooperation/coordination between FMC, USACE, the community, and regulators helps foster good working relationships and can accelerate implementation of the installation's overall environmental restoration program by keeping those involved in the process informed of the status of environmental efforts, soliciting their input, and addressing potential concerns.

6.23.3 Status/Strategy

The BCT plans to continue its activities and to encourage information transfer between FMC, the community, and regulatory agencies through the BCT, the Project Team, RAB, and onboard review meeting process, the document review process, and community involvement programs outlined in Sections 3.6 and 4.6 of this BCP.

6.24 Updating the CERFA Report and Natural/Cultural Resources Documentation

Outstanding issues related to updating the CERFA and Natural/Cultural Resource documents for the FMC are outlined in this section.

6.24.1 BCT Action Items

The following action items need to be addressed in order to update the CERFA report and ensure that natural and cultural resources programs for the BRAC parcel are properly executed:

- Update maps of the environmental condition of property and property suitable for transfer as investigations and RAs are initiated/completed on the BRAC parcel
- Conduct a baseline survey to update the CERFA report and provide supporting data for the Disposal Reuse EIS and FOSL and/or FOST.

6.24.2 Rationale

Updates of the maps of the environmental condition of property and property suitable for transfer are necessary to reflect changes in property classification after completion of RAs. An update of and further compilation of environmental condition of property data through an analysis of baseline environmental data will provide adequate environmental data to support NEPA and property lease/transfer documentation.

FMC has a variety of natural resources. FMC should continue to maintain programs in order to preserve the resources and ensure compliance with federal regulations. FMC also has several documented archaeological sites within its borders. FMC Environmental Office will ensure that historical and archaeological resources at FMC property are adequately identified and preserved throughout the realignment and BRAC parcel disposal process.

6.24.3 Status/Strategy

The CERFA report was finalized in January 1998. The maps of the environmental condition of property and associated CERFA parcels and non-CERCLA parcels are provided as Figures 3-2 and 3-8 in Chapter 3.0 of this BCP.

The maps, which classify property in seven environmental condition categories, were generated using a GIS. The BCT will periodically review the CERFA report and the maps in conjunction with new data from investigations and RAs to determine if parcels can be reclassified to allow property transfer.

A cultural resources programmatic agreement was prepared for FMC and signed by the U.S. Army, the Advisory Council for Historic Preservation, and the SHPO. Property will be maintained to prescribed standards, and any activities will be coordinated with the SHPO.

6.25 Implementing the Policy for On-Site Decision Making

If decisions leading to investigation, remediation, and transfer of property can be made on-site, implementation of the installation-wide remedial action strategy will be expedited. Generally, the BCT will make decisions on site or via conference call to speed the BRAC process.

6.25.1 BCT Action Items

At the present time, the BCT is actively fostering partnerships with the USACE, the community, and regulatory agencies through scheduled meetings and the document review process. This will enhance the BCT's ability to make effective on-site decisions and will speed the BRAC process.

6.25.2 Rationale

Close cooperation and coordination with all parties involved in the restoration process can accelerate implementation of installation-wide remedial actions by keeping key players informed of the status of environmental restoration efforts, by soliciting their comments, and addressing their concerns.

6.25.3 Status/Strategy

The BCT plans to continue its activities and to encourage information transfer between FMC, the USACE, the community, and regulatory agencies.

6.26 Structural and Infrastructural Constraints to Reuse

At the time of this writing, there are no issues that need to be resolved relative to structural and infrastructural constraints at FMC.

A portion of FMC will remain active following the realignment and disposal of the BRAC parcel through the ALARNG, DOJ, HHS, and USFWS. Systems will have to be split and/or ownership and operation and maintenance agreements developed in order to transfer the BRAC parcel and also maintain operations on the FMC property to be returned.

Resolution on the means of transferring existing properties into BRAC and non-BRAC systems and/or the negotiation of ownership and operation and maintenance agreements for the properties are necessary to transfer the BRAC parcel.

FMC developed a Memorandum of Agreement (MOA) with the ALARNG to define properties that the U.S. Army is responsible for investigations and any cleanups that the ALARNG will take responsibility.

6.27 Other Technical Issues to be Resolved

At the present time, no other technical issues have been identified.