FINAL ENVIRONMENTAL IMPACT STATEMENT

Disposal and Reuse
Of
Fort McClellan, Alabama

August 1998

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ENVIRONMENTAL IMPACT STATEMENT ORGANIZATION

This Environmental Impact Statement (EIS) describes the anticipated impacts of the disposal and reuse of Fort McClellan, Alabama. It identifies and describes the proposed actions, alternatives to these actions, and related environmental effects as required by the President's Council on Environmental Quality regulations, the National Environmental Policy Act and Army Regulation 200-2. The main body of the EIS consists of one volume (Volumes I). In addition, Volume II contains appendices that include supporting documents and other relevant information. A summary of the contents of Volumes I and II is provided below.

VOLUME I

EXECUTIVE SUMMARY provides an overview of the information presented in the EIS but is not intended to replace the detailed evaluation presented in the body of the document.

Section 1 **PURPOSE, NEED AND SCOPE** describes the base closure and realignment decision-making process, why the EIS is being prepared, the scope of the document, and the EIS public involvement process.

Section 2 **OVERVIEW OF THE PROPOSED ACTION** describes relevant background information associated with the proposed action and an overview of the proposed action analyzed in the EIS.

Section 3 **ALTERNATIVES** provides a discussion of how the EIS study alternatives were developed, and a description of alternatives to be evaluated in the EIS.

Section 4 **AFFECTED ENVIRONMENT** describes the existing physical, social and economic characteristics of Fort McClellan and its environs.

Section 5 **ENVIRONMENTAL CONSEQUENCES** provides an analysis of the environmental and socioeconomic effects of the proposed action and alternatives.

Section 6 **LIST OF PREPARERS** identifies the professional and technical staff responsible for the preparation of the EIS, and provides a summary of their qualifications.

Section 7 **DISTRIBUTION LIST** identifies public officials, public agencies, public interest groups, organizations, and individuals that received copies of the EIS.

Section 8 **INDEX** provides an alphabetical list of topics addressed in the EIS.

Section 9 **REFERENCES** provides a listing of materials used in the development of the EIS.

Section 10 **PERSONS CONSULTED** identifies public agencies, public interest groups, organizations, and individuals that were consulted during the development of the EIS.

LIST Of ACRONYMS AND ABBREVIATIONS provides a fold out list of abbreviations and acronyms used in the EIS.

VOLUME II

TECHNICAL APPENDICES includes materials that support the development of the EIS. The appendices are:

APPENDIX A:	SCOPING MEETING, DEIS COMMENTS and COMMENT RESPONSES
APPENDIX B:	AGENCY COORDINATION
APPENDIX C:	MOUNTAIN LONGLEAF PINE FOREST ECOSYSTEM
APPENDIX D:	ECONOMIC IMPACT FORECAST SYSTEM (EIFS)
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APPENDIX F:	FMDC REUSE PLAN - SUMMARY
APPENDIX G:	AIR QUALITY SUPPORTING DOCUMENTATION

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Executive Summary

ES.1 INTRODUCTION

Recommendations of the 1995 Defense Base Closure and Realignment Commission (Commission) made in conformance with the provisions of the Base Closure and Realignment Act of 1990 (1990 Base Closure Act), Public Law 101-510, as amended, require the closure of Fort McClellan (FMC), Alabama. Property at FMC that is excess to Army military need will be disposed of according to applicable laws, regulations, and national policy. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, the Army has prepared this Environmental Impact Statement (EIS), which addresses the environmental and socioeconomic impacts of the disposal and reuse of the property at FMC, including reasonable, foreseeable reuse alternatives.

ES.2 FORT McCLELLAN SETTING/BACKGROUND

FMC is located in Calhoun County, in northeast Alabama. FMC includes three main bodies of government-owned land in the foothills of the Appalachian Mountains:

- The Main Post, consisting of approximately 18,929 acres, adjoins Anniston, Alabama, and extends six miles to the northeast towards Jacksonville, Alabama, in the valley west of the Choccolocco Mountains. Approximately 12,000 acres of the Main Post are characterized by undeveloped mountains.

- To the east, the Choccolocco Corridor (consisting of approximately 4,488 acres leased from the State of Alabama) connects FMC with the Talladega National Forest. Within the National Forest, approximately 100,000 acres of woodlands are accessible for training in the event of national emergency or with the approval of the U.S. Department of Agriculture — Forest Service (USDA-FS). The Choccolocco Corridor lease will not be renewed and the land will remain with the State of Alabama.

- Pelham Range, consisting of approximately 22,245 acres, is located approximately eight miles due west of FMC's Main Post cantonment area. Pelham Range is used for maneuvers, firing ranges, and field training. The entire Pelham Range will remain as Army property, but will be licensed by the U.S. Army to the Alabama Army National Guard.

BRAC 95 recommendations included the retention of a Reserve Component Enclave. Accordingly, the Army plans to retain 409 acres of land within the Main Post, and the entire Pelham Range area for this purpose. In addition, there are 1,160 acres in three parcels located along the eastern boundary of the Main Post which are public domain lands withdrawn from the Bureau of Land Management (BLM). The Army has notified the BLM of the closure and that these lands will be relinquished. BLM is expected to

leave these lands with the Army for disposal. Including the public domain lands there are approximately 18,520 acres available for disposal and reuse (18,929 total Main Post acres less 409 acres to be maintained for reserve training).

ES.3 PROPOSED ACTION

The primary Army action analyzed in this EIS is the disposal of approximately 18,520 acres of excess property at Fort McClellan. In addition, this document analyzes impacts associated with potential reuse activities as a secondary action to be accomplished by other (non-Army) entities.

ES.4 DISPOSAL PROCESS

Methods available to the Army for property disposal include: transfer to another federal agency; public benefit conveyance; economic development conveyance; negotiated sale; and competitive sale. The method of disposal is determined, in part, by the following three-step screening procedure that assesses the demand for the facilities by the Department of Defense (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 the BRAC recommendation.

- **FMDC (FMRRA) 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 (BRAC, 1990), property that is surplus to the Federal Government's needs is to be screened by the Fort McClellan Development Commission (FMDC) and its predecessor, the Fort McClellan Reuse and Redevelopment Authority (FMRRA), through the solicitation of notices of interest from 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 (USACE). The formal state and local screening process does not commence until the Department of Housing and Urban Development (HUD) approves the FMDC'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 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 formal screening process has not been completed. DOD and federal screening is complete and FMDC has received expressions of interests. However, Army's formal state and local screening was delayed pending HUD's approval of FMDC's Reuse Plan. There were no DOD or federal requests for properties and approximately 409 acres are being retained by the Army for reserve training. Approximately 18,520 acres will be available for transfer or conveyance to FMDC or others. The FMDC is responsible for the planning of the redevelopment of the reuse area.
The FMDC Plan provides for a balance of public and private reuses for the excess property, including residential, office, retail, industrial, training/education, recreation and open space uses; and, retention of certain community facilities. Approximately one-half of the existing 6,083,000 square feet (SF) of building space is proposed for retention, including the Post Headquarters and adjacent administration buildings; the Military Police School and Chemical School facilities; selected instructional, recreational and housing facilities; the DOD Dependent School; and the Commissary. An additional 3,000,000 to 3,500,000 SF of

new construction is also proposed. Approximately 7,200 acres of the 18,520 acres comprising the disposal area is proposed for development (including highway improvements associated with the Eastern Bypass), with the remaining area reserved for passive recreation, development reserve, and open space. The Army is considering the FMDC reuse plan as the primary reuse determinant in defining the reuse alternatives analyzed in this EIS.

ES.5 ALTERNATIVES

Immediately following closure, planned for September 30, 1999, the Army will place the property to be disposed of in caretaker status until transfer or conveyance. Under this No Action Alternative, Army caretaker operations will continue until disposal.

Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this EIS. The Encumbered Disposal (ED) 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; unexploded ordnance (UXO); threatened and endangered species; archaeological/historic resources; and utilities interdependencies. The Unencumbered Disposal (UD) Alternative involves transfer or conveyance of the property with either no Army-imposed encumbrances, or the Army removes the causes for the encumbrances, prior to disposal, thereby allowing certification that the property is available for transfer without encumbrances.

Unencumbered disposal of FMC is not reasonable based upon anticipated adverse environmental impacts and the interests of the Army. Therefore, the Encumbered Disposal Alternative is the preferred Army action. This action will result in disposal actions that are timely, support Army requirements, and are compatible with the FMDC Reuse Plan.

Three reuse alternatives (medium low, medium, and medium high intensity) based upon the FMDC Plan are discussed and evaluated. These reuse alternatives represent the full range of reasonably foreseeable redevelopment alternatives. The reuse alternative most closely reflecting the FMDC Plan is the Medium High Intensity Reuse (MHIR) Alternative. Two other reuse alternatives, Medium Intensity Reuse (MIR) and Medium Low Intensity Reuse (MLIR), have also been developed from the FMDC Plan. These alternatives maintain the reuse concepts of the FMDC Plan, but include different reuse intensities which are broad enough to encompass the community's reuse plan.

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 current undeveloped training areas of FMC which may have reuse limitations associated with unexploded ordnance (UXO) which may be present at some locations in this area. The extent, location, and type of UXO present, and specific cleanup/removal recommendations will be identified by a process that is separate from NEPA called an Engineering Evaluation/Cost Analysis (EE/CA). The EE/CA process also involves regulators, provides for public participation, and allows the communities' concerns and priorities to be addressed.

ES.6 ENVIRONMENTAL CONSEQUENCES

Impacts to all resource categories under each alternative are presented in Section 5 of this Final Environmental Impact Statement (FEIS). Impacts to major resource groups are summarized in the following paragraphs:

NO ACTION ALTERNATIVE. No Action, or caretaker status, has either no impact or minor impacts (adverse and beneficial) on most resource areas. In general, the longer the period of caretaker status, the greater the impacts will be. This is particularly true for the Mountain Longleaf Pine (MLP) ecosystem which could be adversely affected under a long term caretaker period if an effective prescribed burn

management program is not maintained. Significant adverse impacts on the local economy would also occur as caretaker status will not enable economic redevelopment of FMC excess lands.

DISPOSAL ALTERNATIVES. Disposal alternatives include encumbered and unencumbered disposal. Unencumbered disposal is not selected based upon the anticipated significant adverse environmental impacts anticipated to biological resources, water resources, soils (geology), UXO, and solid waste (infrastructure), as well as adverse impacts to other resources on FMC (Table ES.1). Unencumbered disposal eliminates the protection afforded natural resources and requires extensive UXO and hazardous waste cleanup prior to disposal which would have adverse ecological impacts. UXO clearance/removal activities, required for unencumbered disposal, are expected to have significant adverse impacts to soils and biological resources. Removal of all UXO may not be feasible from a technical standpoint, and the costs of certain removal options may be prohibitive. UXO which cannot be removed without significant adverse ecological damage may result in certain parcels remaining under federal ownership. Therefore, the ED Alternative is the preferred Army action. This action will result in disposal actions that are timely, support Army requirements, and are compatible with the FMDC Reuse Plan.

REUSE ALTERNATIVES. The environmental consequences of the implementation of each of the three reuse alternatives are discussed and evaluated. The magnitude of the impacts vary with reuse intensity. Impacts to all resource categories under each reuse alternative are presented in subsection 5.4 of this DEIS. Impacts to major resource groups are summarized in the following paragraphs:

- **Land Use.** Under the MHIR and MIR alternatives, adverse impacts to land use can be expected as the disposal area would be developed more intensely than under baseline conditions. The total square footage of built floor space would increase as would the floor area ratio (FAR), and employee density. Some areas currently left in open space or very low intensity uses would be converted to more intense land use types, such as residential, commercial and industrial uses. No adverse impacts are anticipated under the MLIR Alternative as increases in built floor space would be minimal compared to baseline conditions.

- **Air Quality.** Fort McClellan is located in an area that is currently in attainment for all air pollutants. Activities under the all three reuse alternatives would be expected to produce various emission sources associated with industrial operations (long term) and construction activity (short term). Once the reuse areas are occupied by the various residential, commercial, and industrial tenants, an increase in vehicle traffic would generate additional mobile source emissions in the local Air Quality Control Region that could cause significant adverse impacts. The impacts, although significant under all the reuse alternatives, would be highest under the MHIR Alternative and lowest under the MLIR Alternative.

- **Infrastructure (Utilities).** Utility demands associated with the MHIR Alternative would require substantial additions, expansions and extensions of existing utility systems resulting in an adverse impact. The alterations will involve reconfiguration of the distribution and collection systems, and adjustments to meet the increased utility demands at some parcels. The impacts, although applicable

Table ES.1 Fort McClellan Disposal and Reuse Impacts Summary*

Army's Preferred Alternative is Encumbered Disposal ** / Resource Areas	No Action		Disposal				Reuse						Cumulative		
	Caretaker - Direct	Caretaker - Indirect	**Encumbered**** - Direct	**Encumbered**** - Indirect	Unencumbered - Direct	Unencumbered - Indirect	MHIR*** - Direct	MHIR - Indirect	MIR*** - Direct	MIR - Indirect	MLIR*** - Direct	MLIR - Indirect	MHIR***	MIR***	MLIR***
Land Use	/	3	O	3	O	3	3	3	3	3	/	/	3	3	3
Air Quality	●	/	O	3	O	3	■	3	■	3	■	3	■	■	■
Noise	O	O	O	3	O	3	3	3	3	3	3	3	3	3	3
Water Resources															
Surface Water	/	O	/	3	■	■	3	3	3	3	3	3	3	3	3
Floodplains	/	/	3	3	■	■	3	3	3	3	3	3	3	3	3
Ground Water	/	O	3	3	O	3	3	3	3	3	3	3	3	3	3
Geology	/	O	3	O	■	/	3	3	3	3	3	3	3	3	3
Infrastructure															
Utilities	3	3	/	/	3	3	3	3	3	3	3	3	/	/	/
Solid Waste	O	O	/	/	■	3	/	3	O	3	O	3	/	/	/
Transportation System	/	O	/	O	/	3	■	3	■	3	■	3	3	3	3
Ordnance & Explosives	O	3	3	3	■	■	3	3	3	3	3	3	3	3	3
Hazardous & Toxic Mats.	O	/	/	/	O	O	/	/	/	/	/	/	/	/	/
Permits & Reg. Auths.	/	/	/	/	3	3	/	/	/	/	/	/	/	/	/
Biological Resources															
Fish & Wildlife	O	O	/	O	3	■	3	3	3	3	3	3	3	3	3
Veg./Plant Resources	O	3	/	O	■	■	3	3	3	3	3	■	3	3	■
Wetlands	/	O	3	O	3	■	3	3	3	3	3	3	3	3	3
Federal T & E Species	O	O	/	O	3	3	/	/	/	/	/	/	/	/	/
Species of Concern	O	3	3	O	■	■	/	3	/	3	/	■	/	/	3
Int. Nat Res Mang.	3	3	/	3	■	O	O	3	3	3	3	3	3	3	3
Cultural Resources	3	3	O	3	3	3	/	/	/	/	/	/	/	/	/
Sociological Environment	3	3	O	/	3	/	3	3	/	/	/	/	/	3	3
Economic Development	O	■	3	O	3	O	●	●	●	●	O	O	O	O	O
Quality of Life	/	3	/	/	/	/	3	3	/	/	/	/	3	/	/
Installation Agreements	3	3	/	3	3	/	/	/	/	/	/	/	/	/	/

* Represents most adverse impact whenever multiple impacts have been identified.

***MHIR = Medium High Intensity Reuse Alternative
***MIR = Medium Intensity Reuse Alternative
***MLIR = Medium Low Intensity Reuse Alternative

Direct Impact = Impact caused by the proposed action and occurs at the same time and place.
Indirect Impact = Impact caused by the proposed action but is later in time or more removed in distance.

Impacts Legend:
O Beneficial (minor)
● Beneficial (significant)
3 Adverse (minor)
■ Adverse (significant)
/ No impact (effect) on resource attribute or attribute not present

under all the reuse alternatives, would be highest under the MHIR Alternative and lowest under the MLIR Alternative.

- **Infrastructure (Transportation).** Additional traffic generated as a result of the reuse of FMC would impact the local and regional roadway system. Significant adverse impacts are anticipated under all three implementation alternatives (MHIR, MIR, and MLIR alternatives). The MHIR Alternative would generate an estimated 87,750 average daily vehicle trips, or an increase of 425 percent over baseline conditions. MIR Alternative traffic would increase by 250 percent and the MLIR Alternative by 164 percent over baseline conditions. All of this traffic would be directly distributed onto State Highway 21.

- **Ordnance.** DOD guidelines for UXO removal include the completion of an Engineering Evaluation and Cost Analysis (EE/CA) prior to the transfer of property. The EE/CA will determine the extent of UXO throughout the disposal area and present recommendations concerning the reuse activities that can be supported within the disposal area and clearance/removal recommendations. The environmental impacts of UXO clearance activities, associated with the reuse of FMC disposal property, will be directly associated with the extent of UXO clearance activities. Therefore, it is anticipated that the environmental impacts associated with reuse will be highest in the MHIR Alternative and lowest in the MLIR Alternative. These impacts are principally associated with the loss of habitat as a result of UXO clearance and vegetation removal and the subsequent development of parcels.

- **Biological Resources.** In general, impacts associated with reuse within the FMDC redevelopment area (Area 1) will be similar among the three reuse alternatives since: 1) much of this area is already developed as it contains the current FMC cantonment area and 2) the general type of reuse is the same under each reuse alternative, with differences associated with the intensity of use. Consequently, the reuse impacts to the biological resources in this portion of FMC will be similar among the reuse alternatives. Impacts to biological resources within the FMDC passive recreation area (Area 2) vary among the three reuse alternatives since the type and extent of the management activities and public access are different under each alternative.

  Fish & Wildlife. Impacts to fish and wildlife will result in adverse impacts to Neotropical Migratory Birds (NTMB) due to a decrease in forest habitat, increased forest fragmentation, and increased traffic noise, that would be associated with implementation of the MHIR Alternative. Short-term adverse impacts associated with construction of new projects would occur to aquatic species due to soil erosion. It is anticipated that the environmental impacts associated with reuse will be highest in the MHIR Alternative and lowest in the MLIR Alternative.

  Vegetation/Plant Resources. Impacts to vegetation and plant resources associated with reuse would occur due to loss of forest habitat, including unfragmented, fragmented and interior forest habitats. Overall forest habitat loss will be highest in the MHIR Alternative and lowest in the MLIR Alternative. However, under the MLIR Alternative, significant adverse impacts to the MLP ecosystem will occur as forestry management practices will not include the continuation of prescribed burns. Without range fires or a prescribed burn program, long-term significant adverse impacts to the MLP ecosystem are expected to occur at FMC.

  Wetlands. Impacts to wetlands could occur as a result of redevelopment activities. Development in or adjacent to wetlands could have a direct adverse impact to wetland areas. Adverse indirect impacts to wetlands could occur as a result of runoff from industrial areas and other impervious surfaces. Impacts to wetlands could be minimized through adherence to Section 404 requirements and through the development of effective stormwater management systems.

  Threatened & Endangered Species. Adverse effects to Federal T&E species are not expected to occur under any of the reuse alternatives. Pursuant to Section 7 of the Endangered Species Act (ESA), FMC has completed a Biological Assessment (BA) under informal consultation with the U.S. Department of the Interior — Fish and Wildlife Service (USFWS). The BA identifies project design features (PDFs) to avoid adverse effects to the gray bat.

Species of Concern. Impacts to other species of concern would be primarily related to the loss of unfragmented forest habitat and the encroachment into interior forest habitat under the MHIR and MIR alternatives. Under the MLIR Alternative significant adverse impacts to the species associated with the MLP ecosystem will occur since forestry management practices will not include the continuation of prescribed burns. Fire is needed to maintain the long-term viability of the MLP ecosystem and the unique habitats it harbors. The white fringeless orchid (WFO) occurs within seep communities that would be dominated by deciduous shrub species without periodic fire. State ranked herbaceous species such as sky blue aster, pale coneflower, eastern purple coneflower, and Fraser's loosestrife would also be adversely impacted. Potential impacts to Pearson's hawthorn, a species thought to be extinct but which may be present at FMC (studies are ongoing to verify recent preliminary field identifications), could exist under all three reuse alternatives.

Integrated Natural Resources Management. Impacts associated with recreational hunting, fishing and related activities would be variable and associated with the reuse alternative. Under the MHIR Alternative beneficial impacts are anticipated since inactive range areas would allow more areas to be available for outdoor recreation users. Conversely, under the MIR and MLIR alternatives, adverse impacts are anticipated as a result of restrictions on the recreational use of some areas of FMC.

- **Sociological Environment.** Potential adverse impacts could occur as related to the population increase associated with the 9,584 new jobs created under the MHIR Alternative. The total daytime population of the reuse area, including employees and residents, would almost double to over 17,600 from the current level of approximately 9,000. The extra demands placed on housing, schools and public services could adversely impact these resources if development occurs over a short period of time. Under the MIR and MLIR alternatives the increases in population will adversely impact the socioeconomic environment.

- **Economic Development.** Short and long-term significant beneficial impacts would occur under all of the reuse alternatives. Direct long-term impacts resulting from employment and expenditures associated with the reuse activities include the creation of additional new jobs in the retail, service and industrial sectors; the generation of additional annual income as a result of the jobs directly created; and, an increase in annual regional sales (business) volume. However, these increases in economic activity would occur over an extended period of time and represent the level of impact at full build-out. Local government revenues would increase under the reuse alternatives, with the enhanced tax base from reuse resulting in increased real property tax revenue. In addition, sales tax revenue would increase. It is anticipated that the economic benefits associated with reuse will be highest in the MHIR Alternative and lowest in the MLIR Alternative.

CUMULATIVE IMPACTS. The cumulative impacts of past, present and reasonably foreseeable actions within and around FMC are analyzed in this FEIS. The results of this analysis are presented in subsection 5.5. In general, the cumulative impacts are similar to those detailed under the encumbered reuse alternatives. Impacts of the proposed action may be significant on an individual resource category within the confines of the analysis area; however, these impacts may become less than significant on a regional cumulative impacts analysis basis (e.g. the impacts of the proposed action may be significant on existing transportation system at several selected sites within the analysis, but these same impacts are not significant to the regional transportation network). The analysis includes an evaluation of the impacts associated with encumbered reuse in conjunction with foreseeable actions such as regional roadway improvements and forest management in the Talledega National Forest.

ES.7 MITIGATION RESPONSIBILITY AND PERMIT REQUIREMENTS

Mitigation for impacts associated with the No Action Alternative, the Encumbered Disposal Alternative, and the Reuse Alternative are summarized below.

NO ACTION. The longer FMC were to remain in caretaker status, the greater would be the potential for the predicted adverse impacts to affect various resources. The Army would implement the following mitigation measures to reduce or avoid adverse impacts associated with caretaker status as they might occur.

- Conduct installation security and maintenance operations to the extent provided by Army policies and regulations for the duration of the caretaker period, and transfer responsibilities for these functions to non-Army entities as soon as practicable to minimize disruption of service.

- Identify clean or remediated portions of the installation for disposal and reuse and prioritize restoration and cleanup activities to ensure timely disposal and reuse of remaining portions. Recycle solid wastes and debris where practicable.

- Utilize natural attenuation for environmental remediation at appropriate sites wherever there is no imminent threat to human health or the environment.

- Retain federal ownership of property where UXO clearance would cause significant adverse and unacceptable ecological damage.

- Continue natural resources management programs including, endangered species management plan provisions, integrated natural resources management plan provisions, land management, pest control, forest management, and erosion control, but at reduced levels. Additionally, agreement with other Agencies would be sought to maintain the MLP ecosystem through the continuation of prescribed burns and other management procedures. Continue close coordination with other federal agencies such as the U.S. Department of Interior — Fish and Wildlife Service (USFWS) and state agencies.

- Actively support interim leasing arrangements, where environmental restoration efforts permit, to provide for job creation, habitation and maintenance of structures, and rapid reuse of the installation.

- Prior to final disposal, conduct complete cultural resources surveys of FMC property to the maximum extent possible so as to ensure no adverse effects on the resource that might be present, and finalize the Programmatic Agreement with the State Historic Preservation Officer.

DISPOSAL. To avoid, reduce, or compensate for adverse impacts that might occur as a result of encumbered disposal, the Army would:

- Transfer property with deed covenants, restrictions and notices, as appropriate, for residual environmental contamination, lead base paint, asbestos, UXO clearance actions, protection of historic and cultural resources, and protection of gray bat habitat.

- Continue required cleanup process and remedial actions.

- Complete EE/CA and any necessary UXO investigations to delineate the extent of UXO on excess FMC property and provide recommendation/notification regarding removal actions and use restrictions.

- Retain federal ownership of property where clearance/removal of UXO would cause significant adverse and unacceptable ecological damage.
- Continue to work with the FMDC to ensure that, to the maximum extent feasible, encumbered disposal transactions are consistent with the adopted community reuse plan and implementation strategy.

- Conduct complete cultural resources surveys prior to formal disposal of FMC property.

- Maintain installation buildings, infrastructure, and natural resources in caretaker status to the extent provided by Army policy and regulations until disposal (or lease).

- Notify future owners of the property, in conveyance documents, of particular obligations that would be imposed as a result of the Army's determination of the applicability of an encumbrance. Conveyance documents would include obligations concerning natural and cultural resources; identify past hazardous substance activities at each site, as required by Comprehensive Environmental Response and Liability Act (CERCLA) and Community Environmental Response Facilitation Act (CERFA); and identify restrictions associated with non-CERCLA hazards such as radon and lead based paint.

REUSE. The Army does not propose the implementation of specific mitigation actions for intensity-based reuse scenarios. This is appropriate because reuse planning and execution of redevelopment actions are a responsibility of non-Army entities. The following identifies general mitigation actions that could be implemented by other parties for the reduction, avoidance, or compensation of impacts resulting from their reuse actions. Potential mitigation actions are suggested for those resource areas most likely to be affected by adverse impacts as a result of reuse. Additional details pertaining to these mitigative measures can be found in subsection 5.6.3.

- **Land Use (Land Development Controls).** Appropriate measures to mitigate any potential adverse impacts associated with development of FMC to an intensity level equal to MHIR including the application of land development controls and planning/design standards by the appropriate governing jurisdiction, whether it be the City of Anniston or Calhoun County.

- **Land Use (Slope and Soil Stability).** Reuse restrictions on the development of areas with steep slopes and/or highly erodible soils would reduce direct and indirect impacts associated with redevelopment activities where soils are disturbed in association with construction, demolition, site remediation or UXO clearance activities. Since large portions of FMC contain steep slopes and highly erodible soils, restrictions on the development within these areas would mitigate impacts associated with soil erosion, siltation, and habitat loss.

- **Air Quality.** The air permit process established by the Clean Air Act (CAA) and the Alabama Department of Environmental Management provides effective controls over new stationary sources. Adherence to the provisions of the CAA and State Regulations would prevent any significant adverse impacts from stationary sources.

  Application of best management practices could be used to control fugitive dust (particulate) during construction. Two potential approaches to control construction dust include applying water or dust suppressants and/or planting of plants and grass to the disturbed areas.

  For mobile sources, a comprehensive air quality analysis should be conducted for each highway/road expansion and for each existing highway/road that experiences a significant increase in Average Daily Traffic. The goal is to reduce vehicle miles traveled and to reduce congestion during peak hours. The air quality analysis should include dispersion modeling using an approved model to determine if a National Ambient Air Quality Standards (NAAQS) will be exceeded. All air quality analyses should be coordinated with both the Alabama Department of Environmental Management and the Alabama Department of Transportation. Additional possible mitigation measures include implementing trip reduction plans, promoting car and van pooling, using economical vehicles, improving highways, and revising work schedules. Other measures include using public transportation, improving road intersection control, and constructing bicycle paths.

- **Water Resources.** Application of best management practices to reduce sediment loading to surface waters could aid in reducing impacts on water quality. Construction of storm water detention/retention systems could help mitigate impacts associated with storm water runoff from impervious surfaces.

- **Geology.** Disturbance of highly erodible soils, especially those soils associated with the steep slopes on the eastern portions of FMC, should be avoided wherever possible. Should these or other soil types be disturbed, desilting basins, sediment traps, silt fences, straw barriers, and other erosion control measures could be constructed.

- **Ordnance and Explosives.** Implement the recommendations from the EE/CA regarding UXO removal activities and land use restrictions.

- **Hazardous and Toxic Materials.** Implement the recommendations of the BRAC Cleanup Plan (BCP) and Remedial Investigations/Feasibility Studies (RI/FS) regarding the extent and type of remedial activities required and the need for any land use restrictions.

- **Biological Resources (General).** Adverse impacts on biological resources would occur primarily as a result of construction. Two principal measures for conservation of significant biological resources are ensuring consultation with natural resources experts and regulatory agencies prior to initiating actions and implementing best management practices in association with approved construction projects. Operational controls could also be applied to minimize any adverse effects of noise and light on sensitive biological resources.

- **Biological Resources (Threatened & Endangered Species).** Adverse impacts to the gray bat are not expected based upon ongoing informal consultation with the USFWS and the implementation of project design features (PDFs) included in the Biological Assessment (BA) completed for the disposal and reuse of FMC.

- **Biological Resources (Mountain Longleaf Pine Ecosystem).** Adverse impacts to the Mountain Longleaf Pine (MLP) community could be mitigated via the implementation of a management program. The principal element of the plan would include the use of prescribed burns to assure the continued long-term viability of this ecosystem. The prescribed burn program will need to provide a fire regime similar to that occurring at FMC under preclosure conditions (i.e. the prescribed burns will require fires of sufficient frequency, intensity, duration, season, and geographic extent to equate to the fires historically caused by the training activities and the prescribed burn program at FMC).

- **Biological Resources (Other Species of Concern).** Management practices that would maintain populations of other species of concern could include the establishment of buffer areas around special interest natural areas (SINAs) and known populations. For the WFO populations, prescribed burns for the MLP ecosystem and watershed protection to maintain the recharge area for the seeps will benefit the WFO.

- **Socioeconomic Resources.** No mitigation is necessary. Mitigation of any potential adverse impacts would be partially accomplished through phased implementation of the development of the reuse area. A 20-year build-out period is anticipated for the reuse area, which will result in gradual development of the area.

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Purpose, Need, and Scope

1.1 PURPOSE AND NEED

The Department of the Army (DA) is reducing its force structure in response to changing global security requirements. As the size of the Army is reduced, fewer installations are needed and activities are being relocated and consolidated at installations that will ultimately provide maximum capability to project and sustain military combat power in support of national military objectives.

Recommendations of the 1995 Defense Base Closure and Realignment Commission (Commission) made in conformance with the provisions of the Defense Base Closure and Realignment Act of 1990 (BRAC 90), Public Law 101-510, as amended, require the closure of Fort McClellan (FMC), Alabama. Property at FMC that is excess to Army military need will be disposed of according to applicable laws, regulations, and national policy. Pursuant to the National Environmental Policy Act of 1969 (NEPA) and its implementing regulations, the Army has prepared this Environmental Impact Statement (EIS), which addresses the environmental and socioeconomic impacts of disposing of the property at FMC, and reasonable, foreseeable reuse alternatives.

The military services used criteria established by the Secretary of Defense and accepted by Congress, and a force structure plan provided by the Joint Chiefs of Staff, to identify closure and realignment actions. These criteria considered military value, return on investment from cost savings, environmental features of potential closing and gaining installations, and socioeconomic impacts. A consolidated Department of Defense (DOD) list of recommended actions was submitted by the Secretary of Defense to the bipartisan Commission on February 28, 1995. The Commission completed their evaluation of the Secretary of Defense's recommendations on June 22, 1995, and forwarded their recommendations to the President on July 1, 1995. The President approved the recommendations and forwarded them to Congress on July 13, 1995. The 1990 Base Closure Act stipulated that once forwarded to Congress, the recommendations would be implemented unless Congress disapproved them within 45 Congressional working days. No disapproval was issued, and the Commission's recommendations became law on September 28, 1995. The Commission's recommendations for base realignment and closure made in 1995 are commonly referred to as BRAC 95.

In accordance with Public Law 101-501, the closure must be completed no later than the end of the six-year period beginning on the date the President transmitted the BRAC report to Congress. The President transmitted the BRAC report to Congress on July 13, 1995; therefore, the closure must be completed by midnight July 12, 2001. The Army's current plans are to complete the relocation of, or discontinue active Army missions, by September 30, 1999; thereby completing the closure of FMC as required by the Base Closure Act. However, the Base Closure Act did not specify a time requirement for disposal of excess FMC land.

Following closure, the Army proposes to dispose of approximately 18,520 acres since the property will be excess to Army needs. The purpose of the proposed action, as described more fully in Section 2, is to dispose of excess property resulting from the implementation of the BRAC 95 decision to close FMC.

1.2 SCOPE AND LIMITATIONS

1.2.1 Scope

This EIS evaluates the direct, indirect, and cumulative impacts of the alternative actions associated with the disposal and reuse of excess property at FMC.

All of FMC's lands are located in Calhoun County, Alabama. Impacts associated with implementation of BRAC 95 actions at FMC are generally expected to be limited to areas within the "Main Post" portion of the installation (as described in subsection 2.2). However, this EIS evaluates all actions (individually and on a cumulative basis), to determine the potential for and extent of any impacts that may affect surrounding communities and land areas.

Two disposal alternatives (encumbered and unencumbered) are presented and evaluated in this EIS, as are three reuse alternatives (medium low, medium, and medium high intensity), which encompass the local community's preferred reuse plan. The environmental effects of "no action", with the property remaining in caretaker status, are also evaluated.

1.2.2 Limitations

The 1990 Base Closure Act specifies that NEPA does not apply to actions of the President, the Commission, or the DOD, except "(i) during the process of property disposal, and (ii) during the process of relocating functions from a military installation being closed or realigned to another military installation after the receiving installation has been selected but before the functions are relocated."

The 1990 Base Closure Act further specifies that in applying the provisions of NEPA to the process, the Secretary of Defense and the secretaries of the military departments concerned shall not have to consider: "(i) the need for closing or realigning the military installation which has been recommended for closure or realignment by the Commission, (ii) the need for transferring functions to any military installation which has been selected as the receiving installation, or (iii) military installation alternatives to those recommended or selected."

The Commission's deliberation and decision, as well as the need for closing or realigning a military installation, are exempt from NEPA (Public Law 101-510, Sec. 2905(c)(2)). Accordingly, this EIS does not address the need for closure or realignment. NEPA does, however, apply to property disposal as a direct Army action, and to reuse of such property as an indirect effect of disposal; therefore, those actions are addressed in this document.

1.3 PUBLIC INVOLVEMENT

1.3.1 General Public Involvement Process

The Army invites full public participation in the NEPA process, and promotes both open communication between the public and the Army and better decision making. All persons and organizations that have a potential interest in the proposed action, including minority, low-income, disadvantaged, and Native American groups, are urged to participate in the NEPA environmental analysis process.

Public participation opportunities, with respect to the proposed action that is the subject of this EIS, are guided by the President's Council on Environmental Quality (CEQ) regulations, E.O. 12898, and Army Regulation 200-2, *Environmental Effects of Army Actions*. These regulations provide for six major

elements of public participation available in conjunction with preparation of this EIS including: 1) Notice of Intent; 2) scoping; 3) public review of the Draft EIS (DEIS); 4) public hearing on the DEIS; 5) public release of the Final EIS (FEIS) and 30-day waiting period; and 6) publication of the Record of Decision (ROD). Each of these public participation elements is discussed below. Related, but separate, public involvement procedures, that are applicable to contaminated site remediation and unexploded ordnance (UXO) removal are also discussed.

1.3.2 Notice of Intent

The Notice of Intent (NOI) is the first formal step in the NEPA public involvement process. The public was initially notified of the U.S. Army's intent to prepare this EIS for the disposal and reuse of FMC through the publication of a NOI in the September 22, 1995 issue of the *Federal Register*. This NOI included all actions to be evaluated by the Army in association with the 1995 Commission's recommendations. Details regarding the Commission's recommendations for FMC are provided in Section 2.

1.3.3 Scoping Process

The scoping process was designed to solicit public comment on issues or concerns that should be addressed early in the EIS process. Public comments, from persons thought to be potentially interested or affected by the planned action were solicited through mailings, media advertisements, and both agency and public scoping meetings. These items were developed to ensure the public was informed and given the opportunity to participate in the decision-making process. While informal comments were welcome at any time throughout the process, the scoping period and scoping meeting provide formal opportunities for public participation in, and comment on, the environmental impact analysis process.

1.3.3.1 Project Mailing List. An initial project mailing list was developed to solicit public input throughout the scoping process. The initial list included over 750 names and included members of the general public who had expressed interest in prior environmental documents prepared by FMC; special interest groups; Federal, state and local agencies and elected officials; minority, disadvantaged, and Native American groups; public repositories (libraries); and regional, state and local media outlets (television, radio and newspaper). This list is maintained and updated throughout the EIS process, and any additional individuals or organizations that express interest in the process are added to the list. The mailing list is used to distribute project notices and information, as appropriate, throughout the EIS process.

1.3.3.2 Public Scoping Process. The public was initially notified of the Army's intent to prepare an EIS by publishing a NOI in the September 28, 1995 issue of the *Federal Register*. Subsequently published was a legal notice for a public scoping meeting to be held on August 6, 1996. This legal notice was published in the *Oxford Independent* (July 26 & August 2, 1996); *Jacksonville News* (July 24 & July 31, 1996); and the *Anniston Star* (July 20 & 21, 1996). In addition, press releases inviting the public to express their views at the referenced scoping meeting were distributed to seventeen local/regional newspapers, television stations and radio stations.

Announcements or "scoping fliers" were mailed to public agencies, public interest groups and organizations, political representatives, and individuals known, or thought to have, an interest in the disposal and reuse of FMC. The fliers consisted of a one-page description of the purpose of the meeting, with an invitation to attend the meeting and/or submit written comments identifying key issues that should be considered as part of the EIS. A separate comment sheet, with return mailing address, was included with the flier. More than 750 notices were mailed on July 19, 1996, approximately two weeks prior to the scheduled scoping meeting.

The public scoping meeting was held on August 6, 1996, at 7:00 p.m. at the FMC Post Theater, Building 2101, Fort McClellan, Alabama. An informational flyer, comment sheet, and registration card were provided to all attendees at the public scoping meeting. A total of 30 individuals completed registration cards, with total attendance of approximately 40.

1.3.3.3 Scoping Results. A total of 32 responses (9 oral and/or written comments received at the public meeting, and 23 written comments received during the 30 day comment period) were received.

As detailed in Appendix A, responses were received from a variety of agencies, organizations, and individuals, including:

- 6 Federal Agencies;
- 5 State Agencies;
- 10 Special Interest Groups/Organizations; and
- 8 Individuals.

1.3.3.4 Summary of Major Scoping Issues Identified. The following paragraphs provide a summary of major issues identified through the scoping process.

Key Areas of Concern to Federal and State Agencies:

- **U.S. Department of Agriculture - Forest Service.** US Department of Agriculture — Forest Service (USDA-FS) listed a variety of issues that should be considered in the EIS including the need to consider the potential impacts to: land-use; socio-economic impacts; threatened, endangered, and sensitive species; wetlands; cultural/historical resources; air quality; water quality; vegetative community effects and restoration; hazardous waste; visual quality; and special uses (i.e. power line rights-of-way crossing National Forest land). The USDA-FS elaborated on each of these issues in its comment letter.

- **U.S. Department of Agriculture - Natural Resources Conservation Service.** U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS) indicated that the EIS should discuss erosion control methods and that planning for the future prevention of erosion on the land should include on-site and off-site effects of erosion on the environment.

- **U.S. Department of the Interior - Fish and Wildlife Service.** U.S. Department of the Interior — Fish and Wildlife Service (USFWS) raised a variety of preliminary issues. The main subjects of concern included the possible impacts of disposal and reuse on endangered and rare species and unique habitats. USFWS noted that the mountain longleaf pine (MLP) ecosystem, found on large parts of the Main Post, may be the best remaining example of MLP ecosystem in the world. The quality of this system is attributed to the periodic fires (associated with military activities) and the lack of development in the area; moreover, the MLP ecosystem is important to neotropical birds and other avifauna in the area. Additionally, USFWS noted concern over any development of natural lands within the Main Post, including the impact of unexploded ordnance removal and development of the area on the local stream systems (i.e. fish and mollusc populations in particular) as well as effects to the terrestrial systems and wildlife.

- **Alabama Cooperative Extension System.** Alabama Cooperative Extension System (ACES) indicated two areas of concern as they relate to the reuse of FMC. These included disposal of ordnance and the location/disposition of waste disposal facilities.

- **Alabama Department of Conservation and Natural Resources - Alabama Natural Heritage Program.** Alabama Department of Conservation and Natural Resources - Alabama Natural Heritage Program (ADCNR - ANHP) identified six areas of concern relevant to the FMC EIS. These include the following: 1) Sensitive fauna and flora including 11 plant species (two are former candidates for federal listing), and three animal species (the endangered red-cockaded woodpecker, and two former candidate invertebrates - a snail and a butterfly species) are dependent upon the integrity of the local forest; 2) The MLP ecosystem of the Main Post represents the best remaining example of this community on a landscape scale; 3) the maintenance of the MLP ecosystem at the Fort requires periodic fires; 4) reuse alternatives that require the clearing of the forests and the excavation of the

mountainsides would: destroy the integrity of the natural ecosystem; pose erosional hazards on the steep terrain; and increase siltation of streams and seeps which harbor sensitive wildlife; 5) the importance of contiguous forests in the areas for neotropical birds; and 6) Eleven Special Interest Natural Areas (SINA) have been identified on the Post. The most important SINA is the 12,000-acre MLP ecosystem which also maintains the smaller SINA's in the area. These SINA's and the sensitive, rare, and endangered species they support should be protected.

- **Alabama Department of Conservation and Natural Resources - Game and Fish Division.** Alabama Department of Conservation and Natural Resources - Game and Fish Division's (ADCNR - GFD's) concerns centered on the Department's interest in obtaining title to suitable undeveloped areas of FMC adjacent to the Choccolocco Wildlife Management Area for multiple uses, including hunting, hiking, birdwatching, photography, camping, and fishing. A request for title transfer for specific portions of the installation was submitted to the Fort McClellan Reuse and Redevelopment Authority (FMRRA) on January 12, 1996.

- **Alabama Forestry Commission.** Alabama Forestry Commission (AFC) provided oral and written comments. AFC would like to acquire approximately 17,000 acres of available FMC forest land to manage as a multiple use forest. AFC prepared a proposal describing their management strategy. Additionally, AFC referenced concerns regarding potential impacts to threatened and endangered species, forest resources (forest fragmentation), migratory birds, and the MLP ecosystem, and stated that these resources would continue to be protected if the AFC manages these lands in the future.

Key Areas of Concern to the Public and Special Interest Groups:

- **Preservation of the Disposal Area.** Many comments were received expressing a desire to preserve the disposal area as natural habitat. The method and extent of preservation varied in the comments. The majority of these comments stressed designation of the area for nature conservation; several respondents would prefer the area to be untouched, while others preferred to have it managed for multiple use recreational purposes.

- **Biological Resources.** Concerns were identified regarding potential impacts to biological resources that exist within the disposal area. The majority of these comments were associated with the potential development of the area. Concerns focused on: unique habitats (MLP ecosystem, unfragmented forest areas, natural areas); Federally-listed threatened and endangered species; state-listed species; neotropical migratory birds; and general wildlife populations and vegetation in the area.

- **Use of the Area for Recreation.** The future use of the area for recreation, specifically hunting and fishing, was identified as a concern. These respondents did not want any development of the disposal area and wanted to have the area transferred to a state or federal agency for management as a wildlife management area or recreational area. Several comments mentioned hunting, fishing, hiking, picnicking, and other recreational pursuits as activities that should occur in the disposal area.

- **Unexploded Ordnance.** Several comments were provided regarding the issue of unexploded ordnance in the disposal area. Concerns included public safety, but most focused on the potential for environmental impacts (associated with the removal process) to occur if this ordnance is removed.

- **Hazardous Wastes.** Several comments mentioned the issue of hazardous wastes and materials occurring on the installation and the need to conduct remediation of any contaminated areas in a responsible manner.

- **Reuse of the Fort.** The public identified concerns regarding the future use of the disposal area. As stated above, most scoping respondents wanted the natural/forested area to remain undeveloped. Suggestions for reuse of the cantonment/developed areas of the disposal area were varied. Specific

suggestions included an environmental education center, correctional facility, automobile plant, shopping mall, and landfill.

- **Other Issues.** Additional concerns included the use of the historic buildings on the installation, the status of archeological sites, and the social and economic impacts associated with the closure of FMC.

1.3.4 Draft Environmental Impact Statement (DEIS)

Copies of the DEIS were made available for public review and comment. A Notice of Availability (NOA) was published in the *Federal Register* on December 19, 1997 to inform the public that the DEIS had been released. A similar notice was also placed in the legal section of local Anniston area newspapers (*Oxford Independent* - December 19 and 26, 1997; *Jacksonville News* - December 24 and 31, 1997; and the *Anniston Star* - December 19, 21, and 31, 1997). These notices identified a point of contact to obtain more information regarding the EIS process, and listed several public libraries where the DEIS could be reviewed. A 45-calendar-day review period (starting with the publication of the NOA in the *Federal Register*) was established to provide all agencies, organizations and individuals with the opportunity to comment on the DEIS.

Copies of the DEIS were located at the following repositories.

Abrams (Fort McClellan Community) Library 2102 Traffic Circle Fort McClellan, Alabama 36205-5020 Contact: Joyce Waybright (205) 848-4151	Anniston - Calhoun County Public Library 108 E. 10th Street Anniston, Alabama 36202 Contact: Mr. Tom Mullins (205) 237-8503 (Special Collections - Alabama Room)
Cole Library Jacksonville State University 700 Pelham Road, North Jacksonville, Alabama 36265-1602 Contact: Ms. Mary Beris (205) 782-5758	Fischer Library U.S. Army Chemical School Fifth Avenue, Building 1081 Fort McClellan, Alabama 36205-5020 Contact: Mr. Richard Pastorett (205) 848-4414
Jacksonville Public Library 200 Pelham Road, North Jacksonville, Alabama 36205 Contact: Ms. Kathryn Childress (205) 435-6332	Oxford Public Library 213 Choccolocco Street Oxford, Alabama 36203 Contact: Ms. Irene Sparks (205) 831-1750
Mobile District, Army Corps of Engineers 109 Saint Joseph Street P.O. Box 2288 Mobile, Alabama 36628 Contact: Mr. Curtis Flakes (334) 690-2777	Ramsey Library U.S. Army Military Police School Building 3181 Fort McClellan, Alabama 36205-5020 Contact: Ms. Carolyn Floyd (205) 848-3737

1.3.5 Public Meeting

A public meeting was held at the Anniston City Meeting Center on January 15, 1998 beginning at 7:00 p.m. (during the 45-day DEIS review period) to receive oral and written comments, on the DEIS, from those desiring to present them in a public forum. A complete transcript of the public meeting is presented in Appendix A.

Written and oral comments received at the public meeting were considered, along with other written comments received during the 45-day comment period, in the development of the FEIS.

1.3.6 Final Environmental Impact Statement (FEIS)

The Army assessed and considered comments, both individually and collectively, provided by members of the interested public and Federal, State, and local agencies. The FEIS incorporates changes suggested by comments on the DEIS, as appropriate, and contains responses (see Appendix A) to all comments received during the DEIS review period. A Notice of Availability (NOA) will be published in the *Federal Register* and the newspapers identified in subsection 1.3.4 above to inform the public that the FEIS has been released. These notices will identify a point of contact to obtain more information regarding the EIS process and note the public repositories (same as in subsection 1.3.4) where the FEIS is available for review.

1.3.7 Record of Decision (ROD)

Following a 30-day waiting period from the date of the FEIS NOA, a ROD will be prepared by the Army and published in the *Federal Register*. Comments received during the FEIS 30-day waiting period will be considered by the decision-maker in reaching the final decision on this action. The ROD will describe the Army's decision regarding the disposal of FMC excess property, identify encumbrances to disposal, explain Army uncertainties, and identify the type and extent of impacts that may occur from disposal and reuse of these lands by other entities. The ROD will also describe actions or encumbrances to disposal to be taken by the Army to reduce or mitigate any significant adverse impacts associated with the Army's disposal action, and explain any Army uncertainties involved in the disposal process.

1.3.8 Contaminated Site Remediation Public Review Process

Remediation or cleanup of contaminated sites under the Army's Base Realignment and Closure environmental program also includes public involvement where closure and disposal are involved. This program is separate from, but often confused with, the EIS process because the actions occur simultaneously during disposal of installation property. Remedial actions under the Comprehensive Environmental Response and Liability Act (CERCLA) include formal opportunities for public participation in reviewing documents and attending public meetings. This EIS discusses sites under investigation by describing the general nature and extent of contamination and identifying the remedial studies that will be completed prior to disposal of affected properties. The public will be kept informed about site remediation studies as they become available and will be invited to participate in public meetings associated with them.

The Army's approach to public involvement in base cleanup include the local community in the installation cleanup program by making information available, providing opportunities for comment, and establishing and seeking active participation on a Restoration Advisory Board (RAB). The RAB is composed of an Army representative, U.S. Environmental Protection Agency (USEPA) representative, Alabama Department of Environmental Management representative, and members of the local community. The RAB is jointly chaired by the Base Realignment and Closure (BRAC) Environmental Coordinator (BEC) at FMC and a member of the Board. The RAB reflects the diverse makeup of the community and gives all stakeholders the opportunity to participate in the cleanup process and make their views known to decision makers. The intent of the RAB is to serve as a forum for the early and continued exchange of cleanup information among the community, installation, and regulatory agencies. To meet this objective, all RAB members responsibilities include: providing advice on environmental restoration issues to the BRAC Cleanup Team (BCT); reviewing, evaluating and commenting on cleanup documents; identifying cleanup project requirements; recommending priorities and sequencing among sites or projects; participating in the initial development and/or reassessment of relative risk evaluations; and identifying applicable standards and (consistent with Section 121 of CERCLA), proposed cleanup levels consistent with planned land use. The RAB conducts regular meetings that are open to the public and maintains mailing lists of stakeholders who wish to receive information on the cleanup program. The BCT will fully consider advice from RAB members, along with the approved reuse plan of the local redevelopment authority and its

priorities and other management issues, in making cleanup decisions. The Fort McClellan Web Page includes a "port" which is designed to provide ready access to remediation related information, as well as applications for candidate members.

1.3.9 Unexploded Ordnance Removal Public Review Process

Over the life of a military range, the types and quantities of ordnance/explosives (OE), including military munitions and other constituents, expended in training have varied greatly due to changes in mission, technology, and training needs. As technology improves and weapons systems are replaced, new types of OE are developed and employed. Because of limited land availability and safety requirements, new ranges are often constructed on top of old ranges. Thus a variety of OE, including unexploded ordnance (UXO), may exist on a military range because of the different types of weapons that have been employed on a particular range during its life cycle.

The cleanup of UXO at closed, transferred and transferring ranges will be handled through an administrative process that includes public involvement similar to the procedures specified under CERCLA. The process is being formalized in a DOD proposed Range Rule (Federal Register Volume 62, Number 187, Pages 50795-50843, September 26, 1997) which is currently being reviewed by the public (note: written comments on this rule were accepted until December 26, 1997). Finalization of the Range Rule is not anticipated to occur prior to late 1998. As currently proposed, Range Rule activities will include public involvement, along with the involvement of other Federal and state regulatory agencies, during the review of alternatives available for the mitigation of OE at closed, transferred and transferring ranges. Pending adoption of the proposed Range Rule, OE issues will be addressed during the Engineering Evaluation/Cost Analysis (EE/CA) process which will incorporate anticipated Range Rule requirements.

Additionally, as noted in the proposed Range Rule, DOD is never fully relieved of its obligations to address public safety and environmental risks caused by OE. If at some future date a problem is discovered at a range where DOD completed the range response process, then DOD will conduct an appropriate response to address the problem. This response typically will be handled as an explosives or military munitions emergency response; however, if the typical circumstances indicate a need for a more detailed response, then DOD will reopen the range response process and conduct any appropriate actions. In the proposed Range Rule, DOD also has stated that if technology limits the range response and the use of the land is restricted, but later, cost effective improvements in technology allow for the removal of such a restriction, then DOD is responsible for conducting a later response, if doing so is consistent with the land transfer agreement and reasonably anticipated land uses that were originally identified.

1.4 IMPACT ANALYSIS PERFORMED

The EIS identifies, documents, and evaluates the effects of disposal and reuse of FMC property. Several other related processes occur in conjunction with the Army's preparation of the property for closure and disposal. These associated processes and their time frames are shown in Figure 1-1.

An interdisciplinary team of environmental scientists, biologists, planners, economists, engineers, archaeologists, historians, and military specialists performed the impact analysis. The team identified resources and topical areas, analyzed the proposed action against the existing conditions, and determined the relevant beneficial and adverse effects associated with the action. Section 4 "Affected Environment" generally describes the conditions of the affected resources and other areas of special interest at FMC as of mid-1995 (prior to the BRAC Commission's recommendation). Along with information presented in the no action alternative, these conditions constitute the baseline for the analysis of effects of disposal and reuse. These effects are described in Section 5 "Environmental and Socioeconomic Consequences".

The document analyzes direct impacts (those caused by the proposed action and occurring at the same time and place) and indirect impacts (those caused by the proposed action but occurring later in time or farther removed in distance but still reasonably foreseeable). Cumulative effects are also addressed. Mitigation measures are identified where appropriate. The socioeconomic effects of disposal and reuse

are assessed by use of the Economic Impact Forecast System (EIFS), developed by the U.S. Army Construction Engineering Research Laboratory (USACERL). The region of socioeconomic influence (ROI) consists of eight counties. Calhoun County, containing Anniston and FMC, is the center of the region. Other counties in the ROI include Cherokee, Etowah, St. Clair, Cleburne, Talladega, Clay and Randolph counties. The rationale for selection of this area as the ROI is provided in subsection 4.13.1.2.

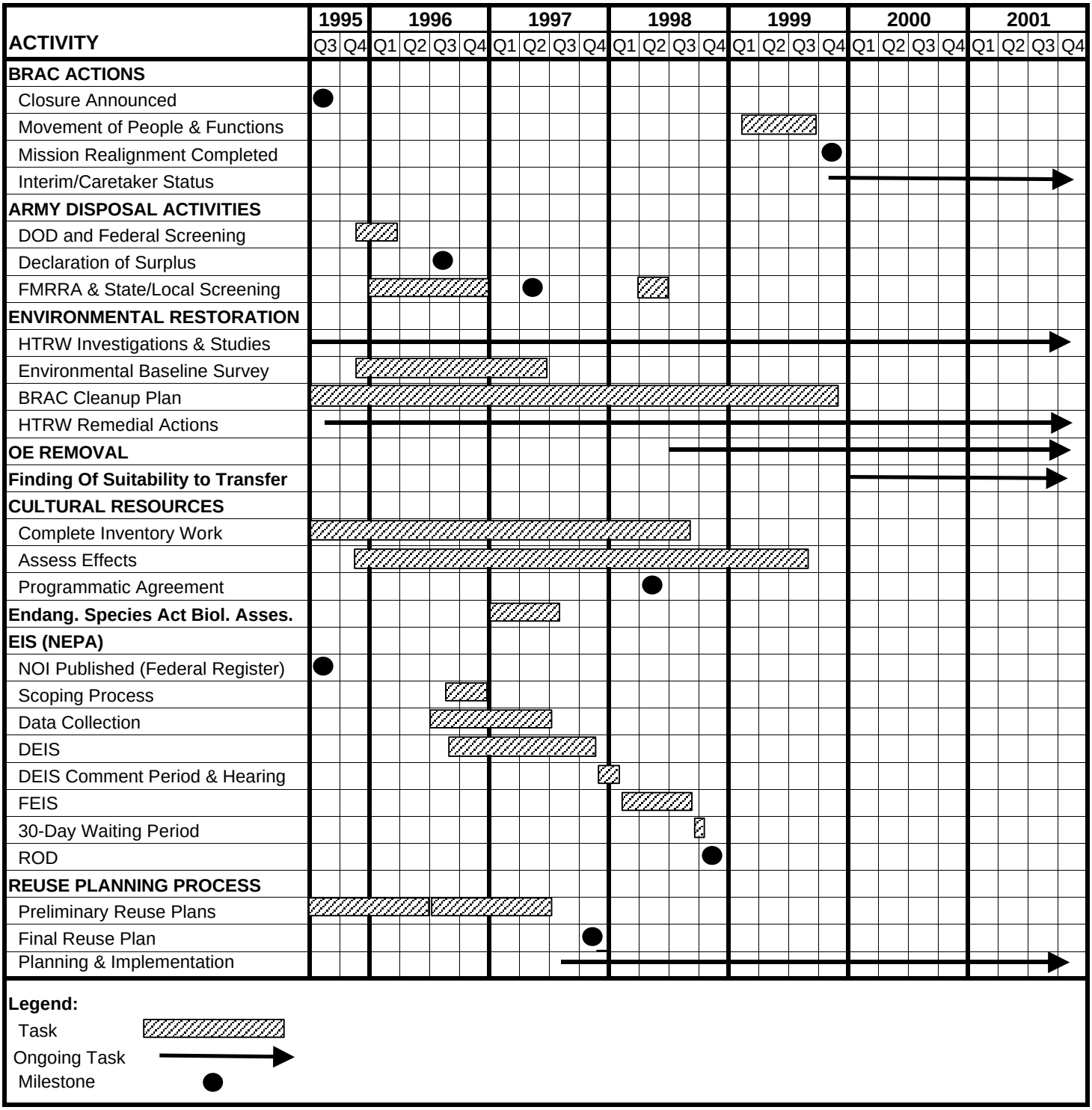
1.5 FRAMEWORK FOR DISPOSAL

Compliance with the 1990 Base Closure Act requires consideration of numerous other statutes and directives. The Army must abide by rules pertaining to transfer of federal property, as well as executive branch policies. There are also concerns associated with the identification and protection of significant installation assets through the disposal process consistent with applicable statutory and regulatory guidance. These issues are discussed further below.

1.5.1 BRAC Procedural Requirements

1.5.1.1 Statutory Provisions. The disposal process is governed by the Defense Base Closure and Realignment Act of 1990 (Public Law 101-510, as amended) and the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 471 et seq., as amended). The latter is implemented by the Federal Property Management Regulations at Title 41 Code of Federal Regulations, Subpart 101-47. The disposal process is also governed by 32 CFR Part 90 (Revitalizing Base Closure Communities) and 32 CFR Part 91 (Revitalizing Base Closure Communities - Base Closure Community Assistance), regulations issued by DOD to implement BRAC law, the Pryor Amendment (Title XXIX of Public Law 103-160, Base Closure Communities Assistance Act), and the President's Five-Part Plan.

Figure 1-1
Fort McClellan, Alabama
Disposal and Reuse Processes and General Implementation Timelines



Source: Parsons ES/HBA based on data provided by the TRADOC Base Realignment and Closure Office, Fort Monroe

1.5.1.2 Excess Property Screening Process. Having been recommended for closure, certain portions of FMC have been determined to be excess to Army needs. These excess lands are subject to specific procedures designed to identify potential subsequent public sector users. The formal property screening process and its results to date are discussed in subsection 2.7.1.

1.5.1.3 The President's Five-Part Plan. On July 2, 1993, the President announced a major new program to speed the economic recovery of communities near closing military installations. The President pledged to give top priority to early use of each closing installation's most valuable assets. A principal goal of the initiative is to provide for rapid redevelopment and creation of new jobs. In announcing the program, the President outlined the five parts of his community revitalization plan:

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

The Army is fully committed to the President's Five-Part Plan. A Base Transition Coordinator has been appointed for FMC, and the Army has taken an active role in providing assistance to the local community.

1.5.1.4 The Pryor Amendment. Congress endorsed the President's plan by enacting Title XXIX of Public Law 103-160, Base Closure Communities Assistance Act, popularly known as the "Pryor Amendment" in recognition of its principal legislative sponsor. Title XXIX, as amended, provides legal authority to carry out the President's plan by granting conveyances of real and personal property at or below fair market value to local redevelopment authorities. Title XXIX creates a new transfer authority, the economic development conveyance (EDC). An EDC can help induce a market for the property and thereby enhance economic recovery and generate jobs. Flexibility is given to the military departments and the communities to negotiate the terms and conditions of the EDC. A detailed application, including the approved community redevelopment plan, serves as the basis for a determination of whether a Local Reuse Authority (LRA) will be eligible for an EDC. The DOD's final rule implementing the Pryor Amendment appears at 32 CFR Parts 90 and 91. The EDC is further described in subsection 2.8.

1.5.2 Relevant Statutes and Executive Orders

Several statutes and Executive Orders are applicable to the disposal and reuse of FMC property. The following discussions note their relevance to the disposal and reuse process.

1.5.2.1 Relevant Statutes.

- **Comprehensive Environmental Response, Compensation, and Liability Act.** The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), better known as Superfund, addresses cleanup of past hazardous waste sites that pose threats to human health or the environment. The Superfund Amendments and Reauthorization Act of 1986 (SARA) expanded applicability of this law to federal facilities. SARA provides procedures to clean up toxic or hazardous substances at closed or abandoned hazardous waste sites.

  Procedures for conducting cleanup are governed by the National Oil and Hazardous Substances Pollution Contingency Plan. Major steps in the cleanup process include preliminary assessment and site investigations of hazardous substance releases, remedial investigation and preparation of feasibility studies for cleanup, a ROD for selecting among cleanup alternatives, and design of

remedial measures and implementation of remedial action. The process includes creation and maintenance of an administrative record for public review and notices to the public for review and comment at major junctures.

Army compliance with the National Oil and Hazardous Substances Pollution Contingency Plan occurs through the Installation Restoration Program (IRP). The IRP is conducted at locations having past hazardous waste sites requiring remediation.

- **Community Environmental Response Facilitation Act.** In October 1992, Congress amended Section 120(h) of CERCLA with the Community Environmental Response Facilitation Act (CERFA), Public Law 102-426. CERFA established requirements for contamination assessment, cleanup, and regulatory agency notification and concurrence for federal facility transfers.

  CERFA requires federal agencies to identify uncontaminated parcels, with regulatory concurrence, and it allows transfer by deed of remediated parcels at the point when successful operation of an approved remedy has been demonstrated to USEPA.

  CERFA requires that the identification consider petroleum products as well as CERCLA hazardous substances. For property that is part of a facility listed on the National Priorities List, the identification cannot be considered complete until concurrence is received from the USEPA Administrator. For real property not on the National Priorities List, the identification cannot be considered complete until state concurrence is achieved.

  The law requires a transferring agency to provide a covenant that any response action or corrective action found necessary due to the Army's past actions will be undertaken by the United States. The deed for such parcels must also provide for a right of access to perform any additional response action, including appropriate investigations. Although CERFA does not mandate that the Army transfer real property identified as immediately available, it is the first step in satisfying the objective of identifying real property where no CERCLA-regulated hazardous substances or petroleum products were stored, released, or disposed of. The procedures mandated by CERFA will be observed in property disposal actions at FMC.

- **Resource Conservation and Recovery Act.** Under the Resource Conservation and Recovery Act (RCRA), USEPA defines those wastes which are hazardous and regulates their generation, treatment, storage, transportation, and disposal. USEPA also establishes technical and performance requirements for hazardous waste management units and exercises responsibility over a permit system for hazardous waste management facilities. RCRA is also the source for regulations pertaining to solid waste management and underground storage tank management. Hazardous waste activities at FMC are subject to the provisions of RCRA.

- **Clean Air Act.** The Clean Air Act (CAA) controls the emission of pollutants into the atmosphere. Under the CAA, USEPA has established national air standards. These standards, which express concentrations of designated pollutants, are called the National Ambient Air Quality Standards (NAAQS). The NAAQS, uniformly applied throughout the Nation, are time-averaged concentrations of the specified pollutants that cannot be exceeded in the ambient air more than a specified number of times. Standards have been established for the pollutants sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, lead, and inhalable particulate matter. The NAAQS are to be achieved by the states through State Implementation Plans, which provide for limitations, schedules, and timetables for compliance with NAAQS by stationary sources and transportation control plans for mobile sources.

  Amendments to the CAA in 1990 introduced, at Section 1.76(c) of the Act, a requirement that "No department, agency, or instrumentality of the Federal Government shall engage in, support in any way, or provide financial assistance for, license or permit, or approve any activity which does not conform to an implementation plan approved or promulgated. The assurance of conformity shall be an affirmative responsibility of the head of such department, agency, or instrumentality." Conformity to

an implementation plan means conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. It further refers to conducting activities so that they will not cause or contribute to any new violation of any standard in any area, increase the frequency or severity of any existing violation of any standards in any area, or delay timely attainment of any standard of any required interim emission reductions or other milestone in any area. Regulations regarding determining conformity of general federal actions to implementation plans appear at 40 CFR Parts 51 and 93. As discussed in subsection 4.3, operational activities at FMC are subject to the provisions of the Clean Air Act.

- **Clean Water Act.** Since major amendments in 1977, the Federal Water Pollution Control Act has been known as the Clean Water Act (CWA). This statute, which seeks to restore and maintain the chemical, physical, and biological integrity of the Nation's waters, identifies certain pollutants and sets required treatment levels for those pollutants. The CWA addresses both point source and nonpoint source discharges. Point sources are distinct entities that discharge wastewater into rivers or lakes through distinct conveyances such as pipes, ditches, or canals. Nonpoint sources are those which do not discharge wastewater from a discrete conveyance (e.g., agricultural lands, construction sites, parking lots, streets).

  Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) program. NPDES permits are required for all point source discharges to waters of the United States, including discharges of stormwater associated with industrial activities. CWA provisions apply to FMC with respect to operations at the installation’s wastewater treatment facility and industrial facilities, which are subject to the NPDES permitting provisions.

  Sections 401 and 404 of the CWA contain provisions for the protection of wetlands. The CWA establishes a permitting and water quality certification process for both Federal and private activities having potential effects on wetland areas.

- **National Historic Preservation Act.** The National Historic Preservation Act of 1966 (NHPA) protects buildings, sites, districts, structures, and objects that have significant scientific, historic, or cultural value. The act establishes affirmative responsibilities of federal agencies to preserve historic and prehistoric resources. Effects on properties that are on, or eligible for, the National Register of Historic Places (NRHP) must be taken into account in planning and operations. Any property that may qualify for inclusion on the NRHP must not be inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate.

  National Register of Historic Places criteria are those qualities of significance in American history, architecture, engineering, archaeology, and culture present in districts, sites, buildings, structures, and objects of state, local, regional, or national importance. These properties possess integrity of location, design, setting, materials, workmanship, feeling, and association.

  Fulfillment of the purposes of the NHPA is assisted through consultation with the Advisory Council on Historic Preservation (ACHP) and with each State Historic Preservation Officer (SHPO). Prior to final disposal action, the Army must ensure that NHPA Section 106 consultations are complete and that appropriate considerations have been afforded FMC properties which are on or eligible for the National Register.

- **Archaeological Resources Protection Act.** The Archaeological Resources Protection Act (ARPA) prohibits the removal, sale, receipt, and interstate transportation of archaeological resources obtained illegally (without permits) from public or Indian lands and authorizes the agency to promulgate permit procedures for investigations of archaeological resources on public lands under the agency's control. Limited surveys at FMC to date reveal the potential presence of archaeological resources subject to the protection afforded by the ARPA.

The law states that the Secretaries of the Interior, Agriculture, and Defense and their respective employees and agents shall develop plans for surveying the lands under their control. Their task is to determine the nature and extent of archaeological resources and prepare a schedule for surveying those lands which are likely to contain the most scientifically valuable archaeological resources and develop documents for reporting suspected violations of the ARPA. The ARPA requires the issuance of permits for authorized professional excavation or removal of archaeological resources. The ARPA imposes civil and criminal penalties for unauthorized excavation, removal, damage, alteration, or defacement of archaeological resources or attempt to perform such unauthorized acts. Implementing regulations of the ARPA are contained in 18 CFR Part 1312, 32 CFR Part 229, 36 CFR Part 296, and 43 CFR Part 7.

- **American Indian Religious Freedom Act.** The American Indian Religious Freedom Act of 1978 (AIRFA) states the policy of the United States to protect and preserve for American Indians, Eskimos, Aleuts, and native Hawaiians their inherent rights of freedom to believe, express, and exercise their traditional religions. These rights include, but are not limited to, access to sites, use and possession of sacred objects, and freedom to worship through ceremony and traditional rites. They also include the right of tribal leadership to be consulted by federal agencies before burial sites that appear to relate to tribal ancestors are disturbed by agency projects. Regulations implementing AIRFA are located at 43 CFR Part 7.

- **Endangered Species Act.** Under the Endangered Species Act (ESA), federal agencies are required to conserve biological and wildlife species that have been federally listed as endangered or threatened. All federal agencies must consult with the U.S. Fish and Wildlife Service (USFWS) to ensure that any actions authorized, funded, or carried out by the agencies are not likely to jeopardize the continued existence of any endangered or threatened species or to result in the destruction of or substantial damage to its critical habitat. This consultation, deriving from Section 7 of the act, is often referred to as the Section 7 consultation process, and may include either *formal* or *informal* consultations. Section 7(a) of the ESA requires *formal* consultation with the US Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) whenever an action may affect (beneficially or adversely) a listed species or critical habitat. *Informal* consultation with the USFWS or NMFS is always appropriate to clarify if an action is likely to affect a listed species or critical habitat, and should be initiated to proactively and positively address potential issues. While this consultation is in progress, an agency must not make an irretrievable commitment of resources to its project. In connection with disposal of FMC, consultation with the USFWS is required to ensure thorough consideration of potential effects on endangered and threatened species.

  The ESA prohibits the taking of endangered fish and wildlife species. Under the ESA, *take* is defined as "…to harass, harm, pursue, hunt, shoot, wound, kill, track, capture, or collect (or attempt to engage in any such conduct) a species." The definition of *take* has been expanded to include effects to the species resulting from impacts to their habitat. With respect to the *taking* of endangered plants, it is prohibited to remove or seize any listed species.

  Amendments to the ESA in 1982 allow the Secretary of the Interior to approve "incidental" taking of listed species if, after notice and comment, the Secretary finds that the taking will be incidental, the applicant will exert maximum effort to minimize and mitigate the effects of taking, the applicant will ensure adequate funding for the plan, and the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild.

- **Migratory Bird Treaty Act.** The Migratory Bird Treaty Act (MBTA) makes it unlawful for anyone (federal or private individuals) to pursue, hunt, take, capture, kill, possess, sell, purchase, or transport any migratory bird as defined by the Act. FMC lands are known to support numerous birds afforded protection under the provisions of this act. Therefore, the provisions of the act must be considered in evaluation of disposal and reuse alternatives.

- The **National Flood Insurance Act** and **Flood Disaster Protection Act** regulate and preserve the natural and beneficial values of floodplains. The two acts apply to both federal and private activities within designated floodplains and floodways.

1.5.2.2 Executive Orders. Seven Executive Orders (EO) address topics relevant to the Army's disposal of FMC. These EO's are described below:

- **Executive Order 11988, Floodplain Management.** Issued on May 24,1977, EO 11988 requires federal agencies to take action to reduce the risk of flood loss, to minimize the impacts of floods on human safety, health, and welfare, and to restore and preserve the national and beneficial values served by floodplains in carrying out their responsibilities for managing and disposing of federal lands. Before taking action, an agency must determine whether the proposed action will occur in a floodplain; if so, consideration must be made of alternatives to avoid adverse effects and incompatible development in floodplains.

- **Executive Order 11990, Protection of Wetlands.** Issued on May 24, 1977, EO 11990 requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities for managing and disposing of federal lands and facilities. For any proposal for lease, easement, right-of-way, or disposal to nonfederal public or private parties, the federal agency is to reference in the conveyance document those uses which are restricted under federal, state, or local wetland regulations and to attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successor, except where prohibited by law, or withhold such properties from disposal. The presence of wetlands at FMC makes this EO relevant to resource protection and land use planning at the installation.

- **Executive Order 12088, Federal Compliance with Pollution Control Standards.** Issued on October 13, 1978, EO 12028 provides that federal agencies are to comply with all federal, state, and local environmental requirements. In the context of property to be disposed of at FMC, these requirements will continue as long as the Army retains ownership of the property, including the period during which any portion of the property would be held in caretaker status prior to disposal.

- **Executive Order 12580, Superfund implementation.** Issued on January 23, 1987, EO 12580 delegates to agency heads several decision-making authorities under CERCLA. In the context of FMC, certain responsibilities related to environmental restoration may not be transferred to other parties.

- **Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations.** Issued on February 11, 1994, EO 12898 requires that federal agencies conduct their programs, policies, and activities that substantially affect human health or the environment in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities because of their race, color, or national origin. Compliance must be consistent with Title VI of the Civil Rights Act. On February 11, 1994, the President also issued a memorandum for heads of all departments and agencies, directing that USEPA, whenever reviewing environmental effects of proposed actions pursuant to its authority under Section 309 of the CAA, ensure that the involved agency has fully analyzed environmental effects on minority communities and low-income communities, including human health, social, and economic effects.

  The essential purpose of the EO is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment

means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

- **Executive Order 13007, Indian Sacred Sites.** Issued on May 24, 1996, EO 13007 requires that, to the extent practicable, federal agencies accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and avoid adversely affecting the physical integrity of such sacred sites. This EO pertains to FMC disposal and reuse planning in light of the potential for there being Native American sacred sites at the installation.

- **Executive Order 13045, Protection of Children from Environmental Health and Safety Risks.** Issued on April 21, 1997, EO 13045 requires federal agencies, to the extent permitted by law and mission, to identify and assess environmental health and safety risks which may disproportionately affect children. The Order further requires federal agencies to ensure that its policies, programs, activities, and standards address these disproportionate risks. The Order defines environmental health and safety risks as "risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breath, the food we eat, the water we drink and use for recreation, the soil we live on, and the products we use or are exposed to."

1.5.3 Other Reuse Regulations and Guidance

The DOD's Office of Economic Adjustment published its *Community Guide to Base Reuse* in May 1995. The guide describes the base closure and reuse processes that have been designed to help with local economic recovery and summarizes the many assistance programs administered by DOD and other agencies. DOD's Office of the Assistant Secretary of Defense published the DOD Base Reuse Implementation Manual in July 1995. This volume serves as a handbook for the successful execution of reuse plans. DOD and the Department of Housing and Urban Development have published in 32 CFR Part 175 guidance required by Title XXIX of the National Defense Authorization Act for fiscal year 1994. The guidance establishes policies and procedures, assigns responsibilities, and delegates authority to implement the President's Program to Revitalize Base Closure Communities, July 2, 1993.

1.6 MAJOR AREAS OF COMMENT ON THE DEIS AND CHANGES IN THE FEIS

As outlined in the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR 1503.4(5) dated July 1, 1986), comments received on the Draft EIS have been attached to this FEIS. Appendix subsection A.5 documents all DEIS review comments and provides responses to all substantive comments. Comments received on the DEIS were organized into one of the four following categories:

- Comments that were noted (no additional response required) and that will be forwarded to the Decision Maker for consideration;

- Comments that required clarification of text and information that was provided in the DEIS;

- Comments that required the expansion of the DEIS in order to fully address the issue(s) raised; and

- Comments that warranted additional analysis and incorporation of results and conclusions in the FEIS.

The principal changes that have been made in the FEIS in response to comments on the DEIS are summarized below.

- The FEIS provides additional information regarding the creation of the Department of Justice, National Center for Domestic Preparedness (NCDP) proposed to be established at FMC.

- The FEIS provides updated information regarding the proposed Mountain Longleaf Pine (MLP) National Wildlife Refuge to be established by the USFWS, in partnership with the ADCNR - GFD, at FMC.

- The FEIS includes information on the potential presence of Pearson's Hawthorne, a plant species previously thought to be extinct, within Area 2 of the FMC disposal area.

- The FEIS includes a clarification of baseline mobile source air emissions values.

- The FEIS includes a clarification and re-evaluation of baseline traffic volume at FMC.

- The FEIS incorporates elements of the Final Reuse Plan (FMRRA, 1997d & e) prepared by FMDC whenever the Final Reuse Plan differed substantially from the June 1997 Phase II Reuse Plan (FMRRA, 1997c) used in the preparation of the DEIS.

- The FEIS incorporates the findings of the Biological Assessment which was prepared in consultation with the USFWS to address impacts to the gray bat, a federally-listed endangered species known to forage at FMC.

- Appendix A of the FEIS has been restructured to include scoping comments as well as the DEIS public meeting transcript, comments on the DEIS, and responses to DEIS comments.

- Appendix B of the FEIS has been restructured to include the Biological Assessment (BA), BA correspondence, the cultural resources Programmatic Agreement (PA), and correspondence associated with the establishment of a National Wildlife Refuge at FMC by the USFWS.

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Description of the Proposed Action

2.1 INTRODUCTION

Under provisions of the Base Closure and Realignment Act of 1990 (Public Law 101-510), the 1995 Commission recommended the closure of Fort McClellan (FMC) except for land and facilities required for a Reserve Component enclave, and minimum essential facilities as required to provide auxiliary support to the chemical demilitarization operation at Anniston Army Depot, Alabama. The Chemical Defense Training Facility (CDTF) will operate at FMC until such time as the capability to operate a replacement facility at Fort Leonard Wood, Missouri (FLW), is achieved. The Commission also recommended the relocation of the U.S. Army Military Police School and the U.S. Army Chemical School to FLW and the relocation of the Defense Polygraph Institute to Fort Jackson, South Carolina. In accordance with Public Law 101-501, the closure must be completed no later than July 12, 2001.

The proposed action (Army primary action) is the disposal of excess property at FMC resulting from implementing the BRAC 1995 decision to close FMC. It is Department of Defense (DOD) policy to dispose of property no longer needed by DOD. Consequently, as a result of the mandated closure of FMC, the Army proposes to dispose of excess property of FMC where feasible. Planning for the reuse of the property to be disposed is a secondary action resulting from the disposal. Reuse planning is the responsibility of the Fort McClellan Development Commission (FMDC) and its predecessor, the Fort McClellan Reuse and Redevelopment Authority (FMRRA). The Army's current plans are to complete the relocation of or discontinue active Army missions by September 30, 1999; thereby completing the closure of FMC as required by the Base Closure Act.

2.2 LOCATION OF FORT MCCLELLAN

FMC is located in Calhoun County, in northeast Alabama contiguous to the city of Anniston and approximately 65 miles east of Birmingham, Alabama (Figure 2-1). FMC includes three main bodies of government-owned land in the foothills of the Appalachian Mountains:

- The Main Post, consisting of approximately 18,929 acres, adjoins Anniston, Alabama, and stretches six miles to the northeast towards Jacksonville, Alabama, in the valley west of the Choccolocco Mountains. Approximately 12,000 acres of the Main Post are characterized by undeveloped mountains.

Figure 2-1 General Location of Fort McClellan
(8½" X 11")

- To the east, the Choccolocco Corridor (consisting of approximately 4,488 acres leased from the State of Alabama) connects FMC with the Talladega National Forest. Within the National Forest, approximately 100,000 acres of woodlands are accessible for training in the event of national emergency or with the approval of the U.S. Department of Agriculture, Forest Service (USDA-FS). The Choccolocco Corridor lease will not be renewed and the land will remain with the State of Alabama.

- Pelham Range, consisting of approximately 22,245 acres, is located approximately eight miles due west of FMC's Main Post cantonment area. Pelham Range, which adjoins Anniston Army Depot ½ mile west of US Highway 431, is used for maneuvers, firing ranges, and field training. The Pelham Range will remain as Army property, but will be licensed by the U.S. Army to the Alabama Army National Guard.

2.3 DISPOSAL AND REUSE AREA

The FMC disposal area comprises approximately 18,520 acres (18,929 total Main Post acres less 409 to be maintained for reserve training).

BRAC 95 recommendations included the retention of a Reserve Component Enclave. Accordingly, the Army plans to retain 409 acres of land within the Main Post, and the entire Pelham Range area for this purpose. The Main Post enclave area will include 10 discrete parcels as summarized on Table 2.1 and illustrated on Figure 2-2. In addition, there are 1,160 acres in three parcels located along the eastern boundary of the Main Post which are public domain lands withdrawn from the Bureau of Land Management (BLM). The Army has notified the BLM of the closure and that these lands will be relinquished. BLM is expected to leave these lands with the Army for disposal. These lands are illustrated on Figure 2.2.

The disposal area of 18,520 acres, including the public domain lands, includes the heavily developed area in the flat northwestern portion of FMC. Cane Creek and its tributaries flow west through the Main Post area. The Main Post's administrative, housing and community service facilities are generally located along the northern and southern banks of Cane Creek. FMC's firing ranges are located north, east, and south of the developed area and are generally oriented toward the Choccolocco Mountains. The Choccolocco Mountains contain large portions of undeveloped, forested tracts throughout the remainder of FMC that have been historically utilized for training and recreational activities.

The FMC Main Post cantonment area (that portion of the installation that has been developed) contains a wide variety of buildings including administration, transportation, maintenance, family housing, barracks, libraries, museums, a post office, banks, recreational facilities, community facilities, an auto craft shop, and health care centers. These buildings vary in condition, size, and reuse potential.

Concurrent with the disposal of FMC excess property, the Army will negotiate the transfer of existing utility systems to appropriate providers. The Army prefers to dispose of each utility system as an entity, conditioned to provide services to the Federal organizations remaining on the property at scheduled rates and services acceptable to the government. Existing utilities and infrastructure at FMC are summarized below and described in more detail in subsection 4.7. It is anticipated that right-of-ways (ROWs) would be established for roadways at FMC. Those ROWs would be transferred to an appropriate governing body such as a municipality, the county, or state for ownership and maintenance responsibility. Utilities not lying within a public ROW would require the establishment of easements to be deeded to the corresponding utility by the owner of the affected parcels.

Table 2.1 Fort McClellan Main Post Property to be Retained by the Army*

Map Location #	Area Description	Size of area (acres)

Table 2.1 Fort McClellan Main Post Property to be Retained by the Army*		
Map Location #	Area Description	Size of area (acres)
Property to be retained for the National Guard Bureau (NGB) or Department of Justice (DOJ)**		
5	CDTF**	27
Property to be retained for the Alabama Army National Guard (ALARNG)		
1	1000 Area, Battalion HQ, Parking	24
2	2200 Area and Triangle	60
3	Operations and Maintenance Shop # 10 (OMS) and Armory Training Area	5
4	Military Operations in Urbanized Terrain Training (MOUT) Site	8
6	1600 /1700 / 1800 Area	258
7	Range Control / Emergency Operations Center (EOC) / Chemical Stockpile Emergence Preparedness Program (CSEPP)	2
Property to be retained for the U.S. Army Reserve Command (USARC)		
8	US Army Reserve Enclave	18
Property to be retained by the U.S. Army		
9	Post Cemetery	3
10	POW Cemetery	4
TOTAL		**409**

Notes * Areas 1-10 are located within the Main Post area of Fort McClellan as shown on Figure 2-2. In addition, the entire Fort McClellan Pelham Range area will be maintained for Reserve Component activities.

** The CDTF is anticipated to be used for chemical agent protective purposes training by the DOJ for the NCDP. NGB may also use the facility for training in responing to the use of weapons of mass destruction. CDTF is approved for retention in the RC enclave, but ownership and responsibility for operation could pass to DOJ.

Source: Fort McClellan, Directorate of Environment

- **Roads.** FMC has approximately 112 miles of unsurfaced roads, 99 miles of surfaced roads, and 49 bridges (FMRRA, 1996; FMC 1997d). Streets within the cantonment area are paved and adequately maintained. Hard-surface roadways and unnamed gravel roads provide access to more isolated training areas, ranges and recreation areas. It is anticipated that ownership and maintenance of the roadways will be transferred to an appropriate governing body such as a municipality, the county, or state.

- **Wastewater.** The wastewater management system includes an extensive network of gravity collection sewers, force mains, three pumping stations, and a recently improved wastewater treatment plant. The collection network consists of approximately 338,000 lineal feet (LF) of sanitary sewer pipe and 300 LF of industrial waste pipe (FMRRA, 1996; FMC 1997d). An estimated 75 percent of the network has been sliplined to reduce infiltration and inflow. The wastewater treatment plant has a capacity of 2.2 million gallons per day (mgd) through its secondary treatment facility.

  It is anticipated that the wastewater treatment plant, pump stations and collections systems will be

transferred to a single utility provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the sanitary sewer utility provider.

Figure 2-2 National Guard/Reserve Component Enclave
(11" X 17" B & W)

- **Water.** The potable water supply system provides supply sources, storage capacity, and a distribution network. The primary water source provider is the Anniston Water Works and Sewer Board. A 1.5 million gallon aboveground steel tank provides the current storage capacity. Water distribution occurs through a system of approximately 513,000 LF of pipeline ranging in size from 4-inch to 12-inch in diameter.

  It is anticipated that ownership and maintenance of the water distribution network and the 1.5 million gallon steel tank will be transferred to a single utility provider. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the water utility provider.

- **Stormwater.** The FMC stormwater management system consists of storm water inlets, pipes, channels, waterways, and streams. Cane Creek is the primary stream draining most of the western portion of the installation. In addition, approximately 256,000 LF of storm sewer conveys stormwater runoff collected from inlets throughout FMC (FMRRA, 1996; FMC 1997d). Some FMC facilities lie within the 100-year floodplain boundary of Cane Creek.

  Ownership and maintenance of stormwater conveyance systems lying within public right-of-ways are anticipated to become the responsibility of the corresponding governing body such as a municipality, the county, or state. Ownership of some main stormwater conveyance sewers may also become the responsibility of the same governing agency. However, the owner of each parcel will typically be responsible for maintaining the collection systems within their individual parcel.

- **Natural Gas.** Natural gas is supplied to FMC by Alabama Gas Corporation (ALAGASCO). FMC also has a facility consisting of five 30,000 gallon propane storage tanks to supplement the natural gas during peak demand periods. The natural gas distribution system consists of approximately 187,000 LF of pipelines initially installed in 1965 (FMRRA, 1996; FMC, 1997d).

  It is anticipated that the gas distribution system and the peak shaving plant will be transferred to a single utility provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the natural gas utility provider.

- **Electric.** Electrical power is supplied to FMC by the Alabama Power Company (APCO) to a substation and distributed through a combination of above and below ground lines. APCO currently supplies 14,730 kilovolt-amperes (kVA) and has the capability for making 42,400 kVA available to the installation. The distribution network consists of approximately 857,000 LF of overhead electrical lines and approximately 108,000 LF of underground electrical lines. In addition, some facilities, such as the hospital, have generators capable of sustaining their power during a power outage.

  It is anticipated that the electrical substation and distribution systems will be transferred to a single utility provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the electrical utility provider.

- **Steam Systems.** Heat and chilled water is supplied by four central boiler plants within the cantonment area that have a rated output above 3,500,000 British Thermal Units per hour (BTU/hr). All of the plants are high pressure, steam boiler plants except one (Plant #4) which is a high temperature, hot water plant. Plant #1 serves the 3100 Block area; Plant #2 serves the 2200 Block area and hospital (Buildings 292 and 295). Plant #3 serves the 1000 Block area but has been off-line for approximately 2 years. The 1000 Block area can also be backfed from Plant #2 as it is currently. Plant #4 serves the 1600 and 1800 Block areas.
  Plant #3 is within the reserve enclave and will be retained by the DOD. It is anticipated that ownership of the remaining three plants will be transferred to the new owner of the parcel where the boiler plants are housed. Continuation of operations at these three plants will be at the discretion of the new

owner. The new owner may continue operation as a utility provider or under some type of cooperative agreement with the facilities served by their boiler plant. Ownership of the distribution lines are anticipated to transfer to the owner of the parcel. If the boiler plants continue operation, ownership and maintenance responsibilities of these distribution lines could be transferred to the boiler plant owner. If the boilers do not continue operation, owners of individual parcels previously served by the boiler plants will have to make alternate arrangements for their heating and chilled water needs.

- **Telecommunication Systems.** The telecommunications system at FMC includes an extensive standard (copper) cable network, limited fiber optic cable, and related switching equipment that are connected to an off-post service provider. Bell South Company provides telecommunications services to FMC. FMC has approximately 266,000 feet of copper cable divided into 14 branch cables. Approximately 50% of the wire pairs are currently in use; an estimated 8% of the wire pairs are considered defective. FMC has approximately 5,000 feet of twelve-pair fiber optic cable, with two pairs currently in use.

  It is anticipated that the telecommunication systems will be transferred to a single provider for ownership and maintenance. Ownership of individual service connection lines may be transferred to the parcel owner. Main lines crossing an individual parcel would require that an easement be deeded to the telecommunication provider.

In association with the disposal of utilities, infrastructure, and property, the new owners of the utility systems will be required to provide services to the retained Army enclave at rates negotiated between the Army and the new service providers.

2.4 COMMUNITY REUSE PLAN

At FMC, redevelopment is expected to occur based upon the Fort McClellan Development Commission's (FMDC, previously known as the FMRRA) approved reuse plan. The Army fully supports community planned reuse of the facilities and recognizes that determining specific reuses is beyond its direct responsibility or control. The basic goals of the FMDC are to:

- serve as a community point of contact for input and information relating to the reuse of available property at FMC;
- develop and adopt a comprehensive reuse plan for property to be disposed of;
- develop procedures to market available properties based on long-term reuse potential; and
- promote the creation of new, permanent jobs in Calhoun County and the surrounding areas as a result of planned reuse activities.

Consistent with these goals, the FMDC has completed final plans for the reuse of FMC lands that are included in the Army's disposal action. The FMDC reuse plan, as illustrated on Figure 2-3, focuses on the reuse/redevelopment of approximately 7,200 acres in the western part of the Main Post area of FMC. This area has been historically used to develop most of the supporting facilities at FMC due to the relatively flat land at this location. The remaining 11,000 acres of FMC are mountainous areas that comprise a passive recreation / development reserve area in the FMDC reuse plan.

The FMDC reuse plan consists of a variety of proposed land use types emphasizing a mixed-used development, and a balance of public and private uses. Key features of the FMDC Reuse Plan are described below (FMRRA, 1997d & e).

- A mix of uses, with a majority of the proposed residential areas south of Cane Creek, and the majority of the commercial and industrial areas north of Cane Creek.

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

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

- A major new parkway (McClellan Parkway), primarily along the existing roadway network, that connects to the proposed Eastern Bypass.

- Access points to the property at five locations along State Highway 21.

- An upgrading of the rail line and its extension to the north to provide rail access to many of the industrial sites.

- Construction of the Eastern Bypass and associated interchanges is an integral element associated with the redevelopment of FMC.

Following is a summary of the primary components of the FMDC reuse plan (FMRRA 1997d & e).

Residential (823 acres). Approximately 398 acres are proposed for conventional detached single family housing, and 425 acres are proposed for a variety of attached and detached retirement housing types. A total of 1,060 retirement units and 515 conventional residential units are included in the plan, resulting in an overall density ranging from one to approximately two units per acre. Buckner Circle, which includes the historic Officers Quarters; Summerall; and Baker Estates have been identified as continuing residential areas. A planned retirement community forms an important component of the residential element of the plan. Two new retirement villages - Buckner Retirement Community and the McClellan Retirement Golf Community - are proposed immediately north and south respectively of Summerall Gate Road in the western portion of the disposal area. The Buckner Retirement Community includes the use of sixty existing single story housing units, with the potential to construct an additional 440 units. The McClellan Retirement Community is a proposed high quality single-family residential community built around a new, custom-designed golf course. In addition, an Assisted Care Retirement housing area is proposed for an area focusing on the hospital.

Training/Education (202 acres). A training area centered around the current Military Police School and the Department of Defense Polygraph School is proposed in the reuse plan and is intended to provide special training and conference facilities.

Office (141 acres). Office uses, comprising approximately 1,000,000 square feet (SF) of floor area, are proposed for an area north of Cane Creek between Baltzell Gate Road and the Galloway Gate entrance in the north-west portion of the disposal area. General office uses would comprise the majority of this area, with approximately 25 acres proposed for an office and research park (McClellan Office and Research Park).

Figure 2-3 FMDC Reuse Plan
(11" X 17" COLOR)

Retail/Commercial (228 acres). The reuse plan reflects a combination of small-scale service retailing and larger-scale regional shopping facilities comprising a total of approximately 500,000 SF of floor area. A new "town center," consisting of a variety of community (i.e. post office, meeting hall, commercial recreation) and retail uses, is proposed for that portion of the disposal area focusing on the existing commercial area around the Post Exchange and commissary. In addition to two sites along State Highway 21, a series of retail sites are proposed throughout the reuse area to serve the proposed neighborhoods. A large site, located at the intersection of the proposed Eastern Bypass and the McClellan Parkway, is proposed as a commercial complex to serve a wider market area.

Industrial (924 acres). Three separate areas are proposed for general and light industrial uses focusing on the existing industrial and warehousing areas in the disposal area. A total of approximately 4,500,000 SF of industrial floor area are proposed for development. These areas include several large industrial parcels north of the office and research park adjacent to the proposed McClellan Parkway and extended rail line, and the McClellan Rail Industrial Park east of the McClellan Parkway.

Active Recreation (771 acres). Three golf courses, including the existing Cane Creek Golf Course and two additional courses proposed to complement new residential development, comprise the major components of the active recreation element of the reuse plan. Other active recreation uses proposed include the existing Guillion Recreation Fields which are intended to serve as a major recreation area for both the proposed new neighborhoods as well as the surrounding communities.

Other Recreation\Open Space. Additional recreation uses proposed in the plan include a "town center park" and potentially a small lake within a 98 acre park parcel adjacent to the proposed "town center", and two other parks, including Reilly Lake Park and Buckner Circle Park.

Other proposed recreational uses, comprising an additional 500 acres, include the reservation of 135 acres for the expansion of Lagarde Park; 350 acres for Yahoo Lake and an associated retreat center; and the retention of 15 acres for the Women's Army Corps (WAC) Foundation. A series of trails are proposed for connecting the various open spaces and neighborhoods.

Passive Recreation/Development Reserve/Wildlife Refuge. The remainder of the reuse area is proposed for passive recreational uses and open space. Included in this land use category are wetlands, and the steep forested areas characterizing the eastern three-fifths of the disposal area. Large portions of this area are under consideration for a wildlife refuge.

The proposed Mountain Longleaf National Wildlife Refuge (FMRRA, 1997d) is anticipated to be developed and maintained by the USFWS in partnership with the ADCNR - GFD on approximately 10,000 to 12,000 acres of unique habitat within the FMC disposal area. Although the boundaries of the proposed wildlife refuge have not been determined, the objectives of the refuge include:

- Preserve and enhance the natural MLP ecosystem;
- Help perpetuate Neotropical Migratory Bird resources;
- Preserve the natural diversity and abundance of fauna and flora of the area with special emphasis on endangered and threatened species;
- Provide compatible, wildlife-dependent recreational opportunities such as hunting, fishing, wildlife observation, photography, hunter education, etc.; and
- Promote an understanding and appreciation of fish and wildlife ecology.

DOI/USFWS, as the federal proponent for the Mountain Longleaf Wildlife Refuge would be responsible for completing NEPA analysis. USFWS's analysis would need to consider the environmental and economic impacts of establishment and operation of the refuge.

National Center for Domestic Preparedness. The FMDC Final Reuse Plan (FMRRA, 1997d) includes the establishment of a National Center for Domestic Preparedness (NCDP) for training first responders to

domestic terrorists acts (FMRRA, 1997d) (NCDP became Department of Justice Center for Domestic Preparedness (DOJ CDP) on June 1, 1998; for FEIS NCDP and DOJ CDP are synonymous). The focus of the training would be to prepare relevant State and local first respondents to deal with terrorist acts involving weapons of mass destruction. The Department of Justice (DOJ) is designated in Senate Report 105-48 as the agency charged with directing and coordinating activities at the Center. DOJ is working with the Army and FMDC on proposals and detailed plans of staffing, instruction program, and facility needs, including the use of the CDTF. The establishment of the NCDP at FMC and the development of training is proposed to occur in stages and is expected to incorporate the following elements:

- Initial establishment of NCDP planning cell by DOJ at FMC. This was accomplished on June 1, 1998 as a tenant activity of FMC.

- Partnership of public and private organizations providing quality, cost effective training for first responder professionals and their communities.

- Three initial training courses will be established; Awareness; Operations; and Incident Command. Initial first responder classes will be initiated between August 1998 and post-closure using existing training facilities that have excess capacity and supported by FMC garrison on a reimbursable basis.

- Provide world-class operational and technical environment (facilities/personnel) to evaluate concepts, doctrine, and equipment; to conduct training, assessment and sustainment; to conduct exercises; and to assist responder professionals and their communities.

- NCDP training proposes to utilize a variety of FMC facilities including the: Chemical Defense Training Facility (CDTF); Military Operations in Urbanized Terrain Training (MOUT) facility; Security Operational Test Site (SOTS); Emergency Operations Center (EOC); billeting rooms; classroom(s); Reilly Airfield; and Hospital Emergency Room area.

The DOJ, as the federal proponent for the NCDP, would be responsible for completing NEPA analysis. DOJ's analysis would need to consider the environmental and economic impacts of establishment and operation of the NCDP at FMC, including the continued use of the CDTF and it's source of chemical agents. DOJ has developed an Environmental Assessment (EA) for the conduct of training prior to closure and is preparing NEPA analysis for post-closure training.

2.5 FRAMEWORK FOR EIS ANALYSIS

The BRAC process of property disposal includes predisposal activities and real estate disposal, which in turn will allow for subsequent reuse and development. **Predisposal activities** include contaminated site cleanup, ordnance and explosives removal, protection of significant cultural resources, provision for interim use (as applicable), and implementation of caretaker operations for vacated lands and facilities after closure but prior to property transfer to new owners. **Disposal activities** include a real estate screening process that identifies potential reuse entities, including federal, state, and local organizations and homeless assistance providers.

Property disposal can be accomplished with or without "**encumbrances**". Encumbered disposal involves transferring the property with conditions imposed by the Army. These conditions might be required to protect Army interests, such as easements to ensure access to a retained piece of property in order to address on-site contamination problems or reuse restrictions designed to limit certain types of future activities based on the past uses of a particular parcel. Encumbrances (in the form of notifications, deed restrictions, deed covenants, etc.) may also be appropriate to preserve or protect federally protected resources such as jurisdictional wetlands, significant cultural resources, or federally listed threatened or endangered species. Unencumbered disposal would result in transferring property with no Army-imposed conditions. Encumbered and unencumbered disposal alternatives are further described in Section 3.

Reuse development, a secondary effect of disposal, requires extensive community involvement. The local community has established the FMDC to produce a reuse development plan for the surplus property to be made available to the community.

2.6 PREDISPOSAL ACTIVITIES

2.6.1 Cleanup of Contaminated Sites and Ordnance/Explosives

The process leading to the transfer of excess Army property includes certification that properties are suitable for disposal, and that environmental cleanup of contaminated sites is accomplished to the degree required by proposed future uses, and are protective of human health and the environment.

2.6.1.1 Hazardous, Toxic, and Radiological Waste (HTRW). Environmental restoration activities at FMC will focus on mitigating identified hazardous contamination caused by past training and waste disposal practices. To address the potential dangers of contamination, the DOD has implemented an Installation Restoration Program (IRP) at all installations. At FMC, the responsibility for the completion of the IRP is coordinated by the FMC Directorate of Environment. The U.S. Environmental Protection Agency (EPA) Region IV, the Alabama Department of Environmental Management (ADEM), and the Army have already formed the BRAC Cleanup Team (BCT), which will be responsible for the development and oversight of the cleanup decisions and activities at FMC.

The IRP includes three major phases: 1) Preliminary Assessment/Site Inspection (PA/SI) - the early investigatory stage, 2) Remedial Investigation/Feasibility Study (RI/FS) - the detailed investigatory stage at contaminated sites, and 3) Remedial Design/Remedial Action (RD/RA) - this phase includes the design of the selected cleanup alternative and the actual cleanup of the site (remedial action). To date the IRP process (and related studies) at FMC has included:

- Completion of Preliminary Assessment phases.
- Completion of some SI phase studies, and initiation of additional SI phase studies.
- Initiation of some RI/FS phase investigations including regional geologic studies in cooperation with the U.S. Geological Survey (USGS).
- Remediation activities include: the closure of the sanitary waste portion of Landfill #4; asbestos remediation and radon abatement; underground & above ground storage tank investigations and remediations; and radiological investigations and remediations.

In compliance with base closure requirements, FMC will undergo additional IRP investigations and remediations. The goal of this work is to facilitate the transfer and redevelopment of portions of the land to the local community. To facilitate environmental restoration, the installation BRAC Environmental Coordinator (BEC) formed a BRAC Cleanup Team (BCT) composed of the BEC, a representative of the USEPA Region IV, and a representative of ADEM. In accordance with DOD guidance (DOD, 1993a), the BCT is involved in the decision making process for the cleanup under BRAC.

Public participation in the environmental restoration process is separate and distinct from the process for this EIS. A Restoration Advisory Board (RAB) has been established which provides one of the avenues of input and recommendations from the communities to the BRAC Cleanup Team (BCT), regarding cleanup priorities to surplus property. As shown in Figure 1-1, the total restoration process will extend well beyond the timeline established for the completion of this EIS.

Under the Community Environmental Response Facilitation Act (CERFA), federal agencies are required to expeditiously identify real property offering the greatest opportunity for immediate reuse and redevelopment. Although CERFA does not mandate that the Army transfer real property so identified, the first step in satisfying the objective is the requirement to identify real property where Comprehensive Environmental Response and Liability Act (CERCLA) regulated hazardous substances or petroleum products were known to have been released or disposed of. To these ends, the Army has completed an

Environmental Baseline Survey (EBS) to identify areas at FMC where storage, release, or disposal of hazardous substances or petroleum products or their derivatives has occurred.

The EBS also identifies: non-CERCLA-related environmental or safety issues (i.e. asbestos, lead-based paint, radon, polychlorinated biphenyls (PCBs), radionuclides, and unexploded ordnance) that would limit or preclude the transfer of property for unrestricted use; completed or ongoing removal actions taken at the installation; and possible contamination on adjacent properties that could migrate to the FMC real property.

The EBS serves as a database describing all environmental conditions related to remediation issues. It also will be a contributing factor in formulation of the Base Cleanup Plan. Finally, the EBS is a major source of information in developing a Finding of Suitability to Lease (FOSL) for interim leases and a FOSL for leases in furtherance of conveyance following completion of National Environmental Policy Act (NEPA) analysis and Finding of Suitability for Transfer (FOST).

2.6.1.2 Ordnance and Explosives. Throughout its history, FMC Main Post has been used for artillery, crew-served, small arms, and other weapons training. Based upon historic uses, large portions of FMC may contain unexploded ordnance.

The presence of unexploded ordnance (UXO) on a BRAC parcel is primarily considered to be a safety hazard (In rare instances, constituents associated with UXO and ordnance training can result in CERCLA type contamination. In the event that such contamination is found at FMC, cleanup will be completed as described in subsection 2.6.1.1). The clean-up/removal of UXO is both a safety and ecological concern. All UXO concerns are addressed on a case by case basis. All land transfers involving UXO concerns will be reviewed by the Department of Defense Explosive Safety Board (DDESB) as required by AR 385-64 (USAEC, 1995b). The DDESB approval process for property transfer plans includes an evaluation of:

- The intended end use of the property;
- Characterization of residual UXO;
- Degree of investigation and/or remedial action of UXO;
- The extent of safe use without further removal action; and
- Environmental/Ecological impacts associated with UXO investigations and removal.

DDESB approval of UXO removal plans is required for all UXO removal programs specifically undertaken to prepare a property for reuse. DOD guidelines for UXO removal includes the completion of an Engineering Evaluation/Cost Analysis (EE/CA) prior to the transfer of property. The EE/CA will determine the extent of UXO throughout the disposal area and present recommendations concerning the reuse type's that can be supported within the disposal area and cleanup/removal recommendations. The EE/CA process also includes public participation which allows the communities concerns and priorities to be addressed.

It is anticipated that FMC excess property will be disposed of by a number of smaller parcels versus disposal of the entire installation at one time. Therefore, specific UXO investigations and removal actions will be accomplished over a period of several years based on disposal priorities, planned reuse, complexity of proposed removal actions, removal technology, funding availability/costs, environmental impacts, and other pertinent factors. Specific areas pertaining to UXO and ordnance usage at FMC are discussed in greater detail in Section 4, (Affected Environment) of this EIS.

2.6.2 Cultural Resources.

Buildings, structures, landmarks, and other areas or features of historical significance or interest are protected under the National Historic Preservation Act of 1966 (NHPA). The property to be disposed of at FMC includes a number of significant cultural resources. "Significant" cultural resources are defined as any prehistoric or historic district, site, building, structure, landscape, or object that meets the criteria established for listing on the National Register of Historic Places (NRHP). The Army is proceeding with inventories and assessments of FMC property to identify cultural resources that have the potential for eligibility to the NRHP. The status of these studies is summarized in subsection 4.12 of this EIS.

It was not possible to complete the inventory and evaluation of FMC National Register eligible properties within the time-frame of this EIS.

A site-specific Programmatic Agreement on the disposal of properties at FMC has been developed in association with the Advisory Council on Historic Preservation and the Alabama State Historic Preservation Officer. This Programmatic Agreement (PA) is included in Appendix B of this EIS. The Army will assure NHPA Section 106 compliance before transfer or sale of property.

2.6.3 Interim Uses.

Prior to disposal, the Army may execute leases to facilitate state and local economic adjustment efforts and to encourage economic redevelopment. Pending issuance of a ROD regarding the NEPA analysis for disposal and reuse of FMC, the Army may not make commitments that would significantly affect the quality of the human environment or irreversibly alter the environment in a way that would preclude a reasonable alternative for disposal of the property. Hence, leases in furtherance of conveyance prior to completion of the NEPA analysis of disposal and reuse and issuance of a ROD will not be considered. The Army may, however, enter into an interim lease having a duration beyond the expected completion date of the NEPA analysis of disposal and reuse of the installation. In such a case, the Army would consult with the FMDC prior to entering into the lease. Such interim leases could only allow limited use of the property and facilities such that no reasonable reuse options would be foreclosed prior to the publication of the basewide disposal NEPA analysis conclusions. Prior to granting any lease, the Army would comply with NEPA requirements relevant to the lease and would prepare a Finding of Suitability to Lease (FOSL) to document the environmental condition of the property.

2.6.4 Caretaker Status.

Existing facilities and support equipment and systems at FMC represent a major asset to encourage and facilitate reuse after the Army completes its disposal action. Following closure, FMC facilities and equipment will be subject to caretaker operations until transfer or conveyance to new owner(s) occurs. Under caretaker status, the Army will conduct minimal maintenance procedures as required to preserve and protect those facilities and items of equipment to the extent allowed by regulation and available funding.

In consultation with the FMDC, the Army will determine the duration and required levels of maintenance for the installation's facilities and equipment, in accordance with DOD guidance. Initial levels of maintenance would not exceed the standard of maintenance in effect on the date of closure approval; would not be less than the maintenance required to be consistent with government standards for excess and surplus properties; and would not require any property improvements, including construction, alteration, or demolition, except when the demolition would be required for health, safety, or environmental purposes, or would be economically justified in lieu of continued maintenance expenditures.

In the event the Army completes its NEPA analysis of disposal and reuse prior to the planned closure date (September 30, 1999), the time period for the initial levels of maintenance would normally be no longer than one year after closure of the installation. In the event the Army does not complete its NEPA analysis of disposal and reuse prior to the planned closure date, the time period for the initial levels of maintenance and repair would normally be 180 days after the Secretary of the Army approves the NEPA analysis. The Army may extend the time period for the initial levels of maintenance of property still under its control for an additional period if it determines that the FMDC is actively implementing its redevelopment plan and that such levels of maintenance are justified.

Once the time period for the initial or extended levels of maintenance elapses, the Army would reduce maintenance to levels consistent with federal government standards for excess and surplus properties (i.e., 41 CFR Part 101-47.402 and Part 101-47.4913). Initiation of indefinite caretaker status would result in continued use of minimal facilities needed to ensure the appropriate levels of safety, security, and heath standards for the entire installation. Maintenance activities would occur on the entire installation or those portions not yet transferred or conveyed.

Typical maintenance activities that would continue while in caretaker status include the maintenance of fenced areas to ensure adequate security, mowing and weed control on grounds within the cantonment area for aesthetics and fire protection, and trimming and maintenance of trees and brush to avoid interference with roadways, fences, or buildings. Diseased trees and vegetation would be identified and removed as appropriate within the cantonment area. Irrigation and erosion control would be addressed as required. Natural resources management, hunting, and wildlife management would also be continued, but at reduced levels. Security at FMC would be conducted as in the town and county jurisdictions within the surrounding area.

2.7 DISPOSAL PROCESS

Real estate disposal for Army BRAC properties is governed by the 1990 Base Closure Act, as amended; the Federal Property and Administrative Services Act of 1949, as amended; the Surplus property Act of 1944 (50 U.S.C. 162); and Federal Property Management Regulations. In disposing of property, the Army must also comply with the 1994 Defense Authorization Act, the Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (24 CFR 581; 41 CFR 101-47; 45 CFR 12a), and other laws and regulations (including Title 10 of the U.S. Code and Army regulations) affecting the disposition of federal real property.

The Army's real estate disposal process, as it will be applied at FMC, is described in the following subsections.

2.7.1 Real Estate Screening Process & Results.

The method of disposal is determined, in part by a 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 screening first offers the property to other DOD and federal agencies. A DOD or other federal agency indicating an initial interest must follow up with a firm proposal for use of the property. Under the 1994 Defense Authorization Act, DOD and federal screening is completed within six months after the date of approval of the BRAC recommendation. Federal screening has been completed for FMC and no formal requests for FMC property were received.

- **Local Redevelopment Authority (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 via an LRA's soliciting notices of interest from state and local governments, representatives of the homeless, and other interested parties. An LRA's outreach efforts to potential users or recipients of the property include working with the Department of Housing and Urban Development (HUD), and other federal agencies that sponsor public benefit transfers under the Federal Property and Administrative Services Act. Incorporating the notices of interest submitted to it, the LRA (FMDC) then prepares a redevelopment plan identifying the overall reuse strategy for the installation.

  Expressions of interest were received from 32 local agencies/organizations. These expressions of interest, received by FMDC, are summarized on Table 2.2.

- **Formal State and Local Screening.** The formal state and local screening required by the Federal Property Management regulations is managed by the U.S. Army Corps of Engineers (USACE). The formal state and local screening process does not commence until HUD approves the FMDC's final adopted redevelopment plan. HUD approval includes being satisfied that the plan meets the provisions of the Base Closure Community Redevelopment and Homeless Assistance Act of 1994 (BCCRHAA) and the McKinney Act on a community-wide basis for homeless assistance.

  State and local entities and other public agencies may pursue two options to acquire property via the state and local screening process: public benefit conveyance or negotiated sale. Public-benefit conveyances include use restrictions and are typically granted for public purposes such as aviation, education, health, parks and recreation and historic monuments. A public benefit must be sponsored by a federal agency to be considered for transfer. Some public benefit transfers may be at less than fair market value. Negotiated sales are for public purposes and are at fair market value.

  Additionally, an implementation LRA will be formed, separate from the current FMDC (the planning LRA), which will have the authority to obtain property via an economic development conveyance (EDC). An EDC is made only to the implementing LRA approved by the DOD Office of Economic Adjustment.

2.7.2 Disposal as a Package versus Disposal by Parcels.

Upon completion of all required hazardous waste cleanup activities and cleanup that may be required for other environmental conditions such as fuel, unexploded ordnance or other substances, property subject to disposal under BRAC will generally be disposed of by parcels based on 1) recipient, 2) type of transfer, 3) availability of property, and 4) ability to complete FOST. However, the covenant assuring completion of hazardous waste cleanup under CERCLA, discussed in subsection 2.6.1.1, applies to conveyances of property from the Army to any non-federal entity. To assist the FMDC in achieving its reuse objective of job creation, the Army may identify substantial areas or discrete parcels within the disposal area that require no further action under CERCLA. These parcels may appropriately be conveyed following completion of the EIS process, determination that the parcels are not required for on-going military missions, and the transfer is consistent with the approved FMDC reuse plan.

Table 2.2 Expressions of Interest Received by FMDC	
Organization	**Facilities of Interest**
Alabama Dept. of Conservation and Natural Resources	Acreage and Facilities
Alabama Dept. of Corrections	Facilities and Personal Property
Alabama Dept. of Public Health	Personal Property (Dentistry)
Alabama Dept. of Public Safety	Facilities and Personal Property
Alabama Dept. of Transportation	Real Estate (Eastern By Pass)
Alabama Forestry Commission	Acreage and Personal Property
Alabama Institute for Deaf and Blind	Facilities
Anniston City Schools	Facilities, Acreage, and Personal Property
Anniston Water & Sewer Board	Acreage, Treatment Plant System, and Personal Property
Ayer's State Technical College	Acreage, Facilities, and Personal Property
Calhoun County Area Alliance and Social Interest	Housing, Facilities, Engineer Facilities, Acreage, and Personal Property
Calhoun County Board of Education	Facilities, Library, Acreage, and Maintenance Shop
Calhoun County Commission	Acreage, Facilities, and Personal Property
Calhoun County Economic Development Council	Facilities, Acreage, and Personal Property
Calhoun County Health Department	Personal Property (Dentistry)
Calhoun County Sheriff	Personal property and Facilities
Calhoun County Soil and Water Conservation District	Acreage
Central Church of Christ	Facilities
City of Anniston	Facilities, Personal Property, Golf Course, Acreage, and Athletic Facilities
City of Anniston & East Alabama Regional Planning and Redevelopment Commission	Maintenance Facility and Personal Property
City of Ohatchee	Facilities, Acreage, Ranges, Facilities, and Landfill
City of Piedmont	Personal Property
City of Weaver	Acreage, Facilities, and Personal Property
Community Enabler Developer	Facility
Educational Consortium	Facilities and Personal Property
Jacksonville Day Care Center	Child Development Center
National Association of Letter Carriers	Facility and Personal Property
NE Alabama Business Incubator System	Facilities and Personal Property
New South Investment and Property Management	Residential Areas and Personal Property
Opportunity Center Foundation of NE Alabama	Facilities and Personal Property

Table 2.2 Expressions of Interest Received by FMDC	
Organization	**Facilities of Interest**
Oxford City Board of Education	Portable Facilities and Personal Property
Women's Army Corps Foundation	Facilities and Personal Property
Source: FMRRA, August 1997	

2.8 DISPOSAL METHODS

Methods available to the Army for property disposal include transfer to another federal agency, public benefit conveyance, economic development conveyance, negotiated sale, and competitive sale. The following is a description of each method.

- **Transfer to another Federal Agency.** The Army would transfer the real property to another federal agency.
- **Public-Benefit Conveyance.** State or local government entities and other qualified public agencies may obtain property (at or below fair market value) when sponsored by a federal agency for uses that would benefit the public such as health and education, parks and recreation, wildlife conservation, or public health.

- **Economic Development Conveyance (EDC).** The 1994 Defense Authorization Act provides for conveyance of property to a redevelopment authority at or below fair market value using flexible payment terms. The EDC is intended to promote economic development and job creation in the local community. An EDC is not intended to supplant other federal disposal authorities and cannot be used if the proposed reuse can be accomplished through another authority. To qualify for this conveyance a local redevelopment authority (LRA) must submit a request to the Department of the Army describing its proposed economic development and job creation program. The FMDC (and its predecessor, the FMRRA) has been recognized by the DOD as the planning LRA for FMC. An implementing LRA, which has the authority to obtain property via an EDC, has not yet been approved by DOD. It is anticipated that an approved implementing LRA will be recognized prior to the closure of FMC.

- **Negotiated Sale**. The Army would negotiate the sale of the property to state or local agencies or private entities at fair market value.

- **Competitive Sale**. Sale to the public would occur through either an invitation for bids, an auction, or Request for Proposals (RFP).

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Alternatives

3.1 INTRODUCTION

This section describes alternatives to the primary Army action (property disposal) and to the secondary action (property reuse) to be accomplished by other parties. Disposal alternatives have been structured to assist the Army in deciding whether to dispose of the property with or without restrictions, or "encumbrances" as they will be referenced in this Environmental Impact Statement (EIS). Encumbered versus unencumbered disposal alternatives will be evaluated along with a no action alternative.

Future reuse of excess Fort McClellan (FMC) property is analyzed in the context of land use intensity levels as defined in subsection 3.4. Alternatives based on land-use intensity have been formulated to inform Army decision-makers and the public of environmental impacts expected to occur given the reasonable range of reuses future property owners might implement. The Fort McClellan Development Commission (FMDC) reuse plan was a primary factor considered in developing the reuse alternatives for the effects analysis in the Army's National Environmental Policy Act (NEPA) review process for the disposal action. Use of the reuse plan in this manner meets the requirement that the reuse plan be treated as part of the proposed federal action. The alternatives evaluation process is shown in Figure 3-1.

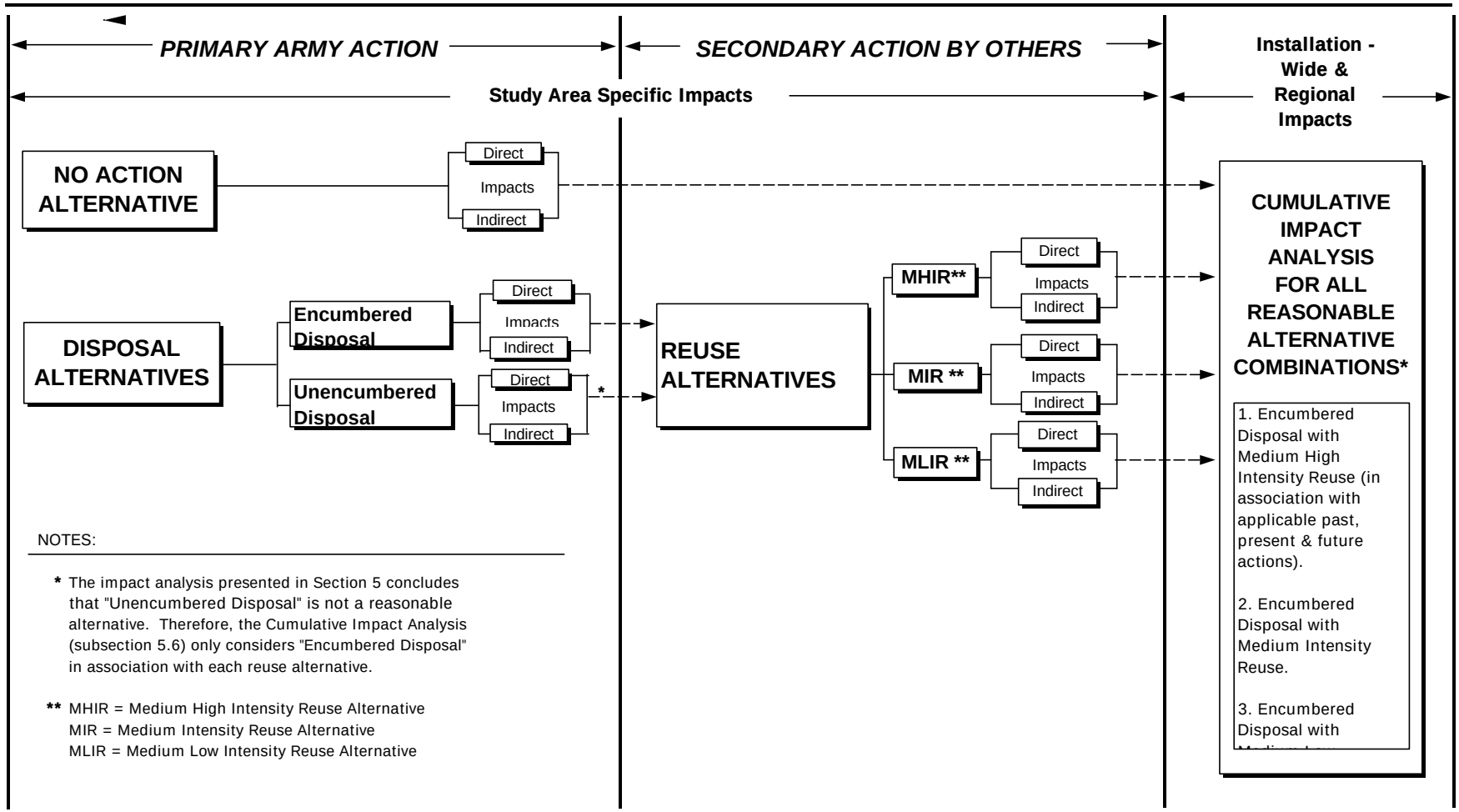
The Army's preferred disposal alternative is encumbered disposal, as described in Section 2. The Army expresses no preference with respect to reuse alternatives since that decision will be made by others.

3.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, the Army would not dispose of the property but would maintain it in caretaker status. Since the specific dates for disposal are presently unknown, the duration of caretaker status cannot be predicted; it could continue for an indefinite period. Maintenance activities would be reduced to the general level described in subsection 2.6.4. Caretaker services may be provided directly by the Army or maybe contracted to a provider organization. One option available to the Army is the potential of FMDC providing the caretaker services under a Community Caretaker Agreement. Regardless of who directly provides the services, Caretaker Services would include the following activities.

- Inspection, maintenance, and use of utility systems, telecommunications, and roads to the extent necessary for caretaker operations and funding availability.

Figure 3 - 1
Alternative Evaluation Process
Fort McClellan Disposal and Reuse EIS



Source: Parsons ES/HBA

- Periodic maintenance of landscaping around unoccupied structures, as necessary, to protect them from fires or nuisance conditions.

- Maintenance of access to permit servicing of publicly owned or privately owned utility or infrastructure systems.

- Maintenance of security patrols, security systems, fire prevention, and protection services.

- Continuation of natural resources management programs including land management, pest control, forest management, and erosion control, but at reduced levels. Additionally, agreement with other Agencies would be sought to maintain the mountain longleaf pine (MLP) ecosystem through the continuation of prescribed burns and other management procedures.

- The Army would continue remediation or cleanup of contaminated sites under the Army's Installation Restoration Program (as discussed in subsections 1.3.8 and 2.6.1.1) and the cleanup of unexploded ordnance (UXO) at closed, transferred and transferring ranges as outlined in the Department of Defense (DOD) proposed Range Rule (as discussed in subsections 1.3.9 and 2.6.1.2).

3.3 DISPOSAL ALTERNATIVES

Pursuant to the Defense Base Closure and Realignment Act of 1990 and the BRAC 95 recommendations pertaining to FMC, continuation of operations at FMC is not feasible. There is no alternative to closure without further legislative direction. As discussed in Section 2, the Army is acting to implement BRAC 95 by closing FMC. Additionally, it is DOD policy to dispose of excess property no longer needed by DOD when it is feasible to do so. Consequently as a result of the mandated closure of FMC, the Army proposes to dispose of excess property at FMC. Interim actions include cleaning up hazardous waste contamination and removing UXO, caring for vacated facilities, and, as circumstances arise, making interim leasing arrangements. Disposal alternatives analyzed in this EIS are referenced as the "Encumbered Disposal Alternative", and "Unencumbered Disposal Alternative". The following subsections describe these alternatives in order to provide the basis for evaluation of potential impacts in Section 5, Environmental Consequences.

3.3.1 Encumbered Disposal

The Army BRAC NEPA methodology is designed to facilitate the reuse and redevelopment of excess property, and is accomplished in a manner that is consistent with the protection of significant environmental resources. Therefore, the process focuses on the identification of cultural, natural and manmade resources that must be used wisely or protected after ownership is transferred to non-Federal control. This is considered, in part, by preparing environmental baseline information during the initial stages of the NEPA process, and providing this information to the local redevelopment authority with the recommendation that this data be considered in formulating various reuse alternatives. The methodology uses the term "encumbrances" to describe valuable resources and any other constraints that influence reuse, such as retention of real estate easements, preservation of historical properties, protection of threatened or endangered species, or an extended property cleanup process. This methodology assists the local reuse authority to develop a reuse plan that satisfies community economic development goals, while protecting critically important resource values.

The Army may determine from the encumbrances identified that it may be necessary to impose legal constraints to future reuse as part of the property ownership transfer documents to: protect or preserve environmental values; promote human health and safety; comply with Federal law; reflect the results of negotiations with regulatory agencies; or to meet specific Army needs (e.g., easements to ensure access to a retained piece of property).

Typical encumbrances include such items as protection and preservation of threatened and endangered species, jurisdictional wetlands, regulatory floodplains, critical habitat, historic properties and sites, archaeological sites, provision of access to remediation and UXO clearance sites, and retention of

property easements and utility/infrastructure rights-of-way. Other types of advisory notices that may be identified by the Army for consideration by the local redevelopment authority include steep slope areas, soils that have development limitations, and the need to incorporate the results of the property screening process.

The presence of special materials, such as asbestos containing material (ACM), lead-based paints (LBP), polychlorinated biphenyls (PCBs), and radiological material require specific handling or disposition similar to those required for contaminated site cleanup. However, the presence of these special materials is usually handled as a restriction or notification during the property transfer process with any necessary actions being the responsibility of the new owner.

Encumbrances and their effects on reuse may vary, depending on the planned reuse. For example, a parcel that is underlain by contaminated groundwater may be considered encumbered for uses that would require the use of groundwater from the contaminated aquifer. The same encumbrance, however, would probably not adversely affect use for recreation that did not rely on groundwater use, as long as soil contamination was not also present.

The Army prefers to dispose of property with minimum encumbrances to future use and development. Consequently under this alternative disposal plan, not all parcels would necessarily have similar encumbrances, and some parcels may be transferred without any encumbrances.

Encumbrances Identified at FMC. The following encumbrances can be expected to apply at the time of transfer or conveyance of FMC property.

- **Wetlands.** As discussed in subsection 4.11.3 FMC includes a variety of wetland communities. Sections 401 and 404 of the Clean Water Act, and Executive Order (EO) 11990, Protection of Wetlands, contain provisions for the protection of wetlands (see subsection 1.5.2.2 for more detail). The protection to wetlands provided by the Clean Water Act (CWA) applies to both governmental and private users; consequently, in order to ensure the continued protection of wetland resources, the Army will notify the new owners of the responsibility to comply with the Clean Water Act if development is planned in or near wetlands.

- **Regulatory Floodplains.** As discussed in subsection 4.5.4, FMC includes a number of regulatory (100-year) floodplain areas. Protection of these floodplains (and procedures designed to ensure that flooding hazards are not significantly increased) are ensured by the requirement for any future owner to comply with the provisions of the National Flood Insurance Act and Flood Disaster Protection Act since these acts apply to both federal and private activities within designated floodplains and floodways. In addition, the Army must comply with the provisions of EO 11988, Floodplain Management, as part of the property disposal process. This requires the Army to determine whether the proposed action will occur in a floodplain; if so, consideration must be made of alternatives to avoid adverse effects and incompatible development in floodplains. Ultimately, the Army may impose restrictive covenants prohibiting land uses within regulatory floodplains to ensure compliance with EO 11988.

- **Threatened and Endangered Species.** As discussed in subsection 4.11.4 FMC does support or provide habitat for certain federally-listed endangered species (gray bat - endangered). Threatened and endangered species are protected under the Endangered Species Act (ESA). The disposal of FMC is considered to be a Federal agency action. Therefore, pursuant to Section 7 of the ESA, a Biological Assessment (BA) was prepared, in consultation with the U.S. Department of Interior — Fish and Wildlife Service (USFWS), for the listed species (gray bat) known to occur on the installation. The BA details the status of the gray bat on FMC and presents Project Design Features (PDF's) to reduce adverse impacts to the species. The PDF's include deed restrictions to be conveyed to future land owners that are protective of the gray bat and its habitat.

- **Cultural Resources.** FMC contains three historic districts (administrative, industrial, and ammunition storage districts), which contain 89 buildings which are eligible for nomination to the National Register

of Historic Places (NRHP) (see subsection 4.12). A Phase IIA archaeological study will occur to delineate the boundaries of the sites which are potentially eligible for the NRHP. Those sites which appear to meet eligibility criteria after the Phase IIA will be subject to Phase IIB. At that time, measures for the treatment of archaeological sites which are eligible for the NRHP will be negotiated. An encumbrance requiring protection of any properties found to be eligible for the NRHP would be passed on to new owner(s) as a condition of sale or transfer. To lessen or remove the deed restrictions requiring preservation, the deed would delineate a process for the new owner to consult with the State Historic Preservation Officer (SHPO) to arrive at a mutually agreeable and appropriate measure for mitigating the adverse effects of a proposed action.

- **Utility System Interdependencies.** Four boiler plants operate as central source of steam heat and domestic hot water to serve three areas that include multiple facilities at FMC. Such utilities operated as single system create interdependencies with future owners unless individual heating systems are provided to separate facilities. FMC's primary potable water source is provided by two non-federal suppliers. FMC owns the wastewater treatment plant that serves installation facilities, but this plant is currently operated by Operations Technologies, Inc. under a contract. These, and other utility systems, are described in detail in subsection 4.7. An encumbrance exists wherever a parcel's or facility's use depends on a common or intermediary provider of these services. As described in subsection 2.3, conveyance of the property assumes that the utility systems will be transferred in their current condition to independent providers that would continue providing service to existing facilities.

- **Access Easements.** Existing easements at FMC include those allowing use of property for utility distribution systems and allowing access to those utilities by the utility providers for maintenance and repairs. Existing easements represent an encumbrance on the future use of property, and would be transferred or conveyed to new owners. Easements could also be imposed on FMC excess property conveyed to future owners to provide access by the National Guard and Army Reserves to areas that would be transferred to them. Additionally easements could be imposed to provide future access to remediation sites.

- **Remedial Activities.** Operations at FMC, over its decades of existence, have resulted in localized hazardous waste contamination. The contaminants and substances of concern include volatile organic compounds, semi-volatile organic compounds, metals, dioxin, and other CERCLA contaminants. For the most part, details of site-specific contamination and site-specific remedial actions remain to be determined. As indicated in subsection 4.9, a variety of buildings and areas at FMC will be subject to some level of cleanup activity. In general, the level of cleanup provided at these buildings and areas will be consistent with the currently planned use for the building or area and will be protective of human health and the environment with potential special risk management considerations given to incorporate future reuse of the property. For example, industrial areas will be cleaned to established industrial standards, while residential facilities (including dependent schools) will be cleaned to residential standards. In conjunction with the remedial activities that might be required during an interim lease or upon conveyance, the Army would retain a right to conduct investigations and surveys; to have Government personnel and contractors conduct remediation field activities; and to construct, operate, maintain, or undertake any other response or remedial action as required.

- **Lead-Based Paint.** The Residential Lead-Based Paint Hazard Reduction Act of 1992 (Public Law 102-550) applies to buildings constructed prior to 1978 and transferred for residential use. Residential structures built before 1978 are assumed to have lead-based paint (LBP) and LBP hazards (as defined by the Act). Any results of the inspections by the Army are provided to prospective purchasers of the property who are allowed to conduct their own inspections. For buildings constructed before 1960, LBP hazards must be abated by the government or the new owner if the building is going to be used for residential purposes such as an individual residence, child care facility, community center, dependent school, etc. An appropriate notice is given to the prospective owners. The presence of unabated LBP or LBP hazards may preclude occupancy by some portions of the population. Upon transfer or conveyance, with respect to buildings constructed between 1960 and 1978, the Army will provide appropriate notice to the prospective owners.

- **Friable Asbestos.** The presence of damaged, friable asbestos or asbestos containing material (ACM) may preclude occupancy of buildings by some portions of the population. Asbestos inspections are conducted and the results of the inspection are provided to the prospective owner. Any damaged, friable asbestos that is a threat to human health or the environment will either be remediated by the government or by the new owner. Asbestos remaining in excess buildings will be transferred or conveyed without removal, and the Army will provide appropriate notice to the prospective owners.

- **Unexploded Ordnance (UXO).** There are numerous sites, at FMC, known or suspected of having UXO (see subsection 4.8). Together, these sites represent a large portion of the installation. The presence of UXO could present a hazard to numerous kinds of 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 fully removed, restrictive covenants would be placed in 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 more detailed Engineering Evaluation/Cost Analysis (EE/CA) which includes public participation and allows the community's concerns and priorities to be addressed.

- **Other Unique or Sensitive Resources.** In addition to the resource factors described as encumbrances above, there are a variety of other natural resources that are of interest to the local community, regulatory agencies, special interest groups, and other interested parties. For example, the existence of the mountain longleaf pine (MLP) ecosystem represents a unique resource at FMC that warrants special consideration. However, since there are no federal or state laws that mandate protection of these other resource types, the Army does not intend to formally "encumber" or mandate future owners to protect these resources. Rather, the Army, through the preparation of this EIS, will fully inform the FMDC, the public and future owners of these other unique or sensitive resources, and encourage future owners to protect and preserve these resources to the maximum practicable extent. In essence, it is up to the local community, through the decisions made by the FMDC (or other authorized Local Reuse Authority (LRA)), to develop reuse plans that seek to balance the need for economic development with the protection of natural and cultural resources that exist on these lands. If the lands are obtained by the LRA or other public agencies, they could impose covenants or other institutional control to protect these resources.

3.3.2 Unencumbered Disposal

Unencumbered disposal would involve transfer or conveyance of the property with no conditions on its future use imposed by the Army or other agencies, or with the Army's having removed encumbrances that can be removed. Under this concept, the Army would convey property without an ability to: 1) protect human health and safety; 2) retain real estate easements for utility systems and roadways; 3) continue efforts to preserve historical properties; 4) provide protection to threatened or endangered species; 5) provide protection to other species; or 6) provide access required to support property cleanup processes. In order to eliminate potential encumbrances while at the same time protecting human health and safety, and the environment, the Army would need to remove all potential encumbrances. In theory, this would require the Army to remove all UXO, remediate all sites (including industrial sites) to residential standards, and restore all groundwater to either natural conditions or drinking water standards. Even these actions however, could not ensure protection of archaeological, historical or biological resources that may be found within the area being disposed of. Additionally, removal of certain encumbrances, is either infeasible or impracticable due to the need to: 1) continue to provide essential public services; 2) comply with statutory regulations; 3) meet the continued needs of the Army; 4) avoid unacceptable environmental damage; or 5) encourage fiscal stewardship. For example, elimination of utility easements could result in the loss of essential services such as water and electricity distribution, and sewage collection and treatment, etc.

The Army examines the potential for removal of encumbrances to determine feasibility, costs, and other issues that could be involved in transfer or conveyance of property in an unencumbered status. Removal of encumbrances (or creation or retention of them) are considered in light of land use planning flexibility, market value, environmental concerns, potential increased management burdens on subsequent owners, and the potential for future property owners to be liable for failure to comply with encumbrance-related requirements.

Subsection 5.3 provides a discussion regarding impacts associated with both the encumbered and unencumbered disposal alternatives as it applies to each of the resource categories evaluated in this EIS.

3.4 REUSE ALTERNATIVES

Upon the closure of activities at FMC, much of the land and facilities at FMC will become excess to Army requirements, and as noted in subsection 3.3 it is DOD policy to dispose of excess property. Consequently, the Army plans to dispose of the excess property at FMC where feasible. Depending upon numerous factors, including information presented in this EIS, disposal of the excess property at FMC might occur as a single event, or as a series of transactions involving the same or several new owners over an extended period of time. Regardless of the method of disposal, timing, or identity of new owners, reuse of the excess property at FMC is reasonably foreseeable. Consistent with statutory requirements, this EIS treats the reuse plan as the primary factor in developing, and as part of, the proposed action and alternatives.

The President's Council on Environmental Quality (CEQ) regulations require evaluation of reasonably foreseeable actions and evaluation of associated environmental impacts, without limitation on the party conducting the evaluation. Accordingly, reuse of the property is evaluated as an action secondary in time, following the Army's primary action of closing FMC and disposing of the excess facilities and land. The following subsections discuss the methodology used to define the reuse alternatives. This EIS analyzes reuse of FMC, which is expected to occur. However, the nature of reuse cannot be identified precisely. The Army considers the FMDC Reuse Plan as the primary factor in defining the reuse alternatives to be considered, and evaluates that reuse plan for potential environmental effects.

3.4.1 Development of Reuse Alternatives

Reuse planning for FMC consists of establishing reuse objectives, planning for compatible land uses that support the community's needs, and marketing among potential public and private-sector entities to obtain interest in use of the property. The reuse planning process is dynamic and often dependent on market and general economic conditions beyond the control of the reuse planning authority.

In recognition of the dynamics inherent to reuse planning, the Army uses intensity-based probable reuse scenarios to identify the range of reasonable reuse alternatives required by NEPA and DOD implementing directives. That is, instead of speculatively predicting exactly what will occur at a site, the Army establishes ranges or levels of activity that reasonably *might* occur. These levels of activity, referred to as intensities, provide a flexible framework capable of reflecting the different kinds of uses that could result at a location. The evaluation of these intensity-based reuse alternatives is also based on consideration of encumbrances that the Army expects to impose on future owners.

3.4.2 Land Use Intensity Categories Described

The Army has established five intensity-based levels that may be considered in formulating an appropriate range of reuse alternatives for any given disposal site and to support the evaluation of potential effects of facility redevelopment (DOA, 1995). These intensity use levels are referenced as: 1) low intensity reuse (LIR), 2) medium low intensity reuse (MLIR), 3) medium intensity reuse (MIR), 4) medium high intensity reuse (MHIR), and 5) high intensity reuse (HIR). At any given installation, analysis of all five levels of intensity might not be appropriate due to historical usage, physical limitations, or other reasons.

The five levels of reuse intensity can be viewed as a continuum. At the low end of the scale is the LIR which represents a minimal level of activity, such as might be found in undeveloped lands or in uses not requiring substantial building or infrastructure improvements (e.g., parks or open-space recreation areas). At the high end of the scale is the HIR which approximates the maximum amount of activity that could occur over a given area. There are several "indicators" of intensity which can be used to measure and compare impacts. These indicators include the density of people at a location (i.e. employees or residents per acre), the amount of building floor space per acre (identified as the floor area ratio or "FAR"), and overall development ratio (based on the amount of developed property in relation to the total amount of property subject to land use planning at a given location). Other intensity indicators include the potential number of vehicle trips generated as a result of the type and density of the activity; rates of utility consumption (electricity, natural gas, water); and, the percent of impervious surface (i.e., buildings, parking lots, streets) associated with a particular land use type and density.

Development of intensity parameters that are appropriate for any given site is based on several sources, including: existing land use plans, zoning regulations and development standards for various types of projects and planning jurisdictions; land use planning reference materials; and, prior Army BRAC land use planning experience. As a result of evaluating various types of intensity indicators in light of their applicability to Army lands subject to BRAC action, the Army has selected five representative and illustrative intensity parameters that may be used to support alternative reuse plan formulation. These parameters are:

- **Residential Density.** This intensity parameter indicates the number of dwelling units per acre, which subsequently can be used to estimate resident population, traffic generation and utility consumption demand.

- **Employee Density (General Space).** This parameter identifies the number of square feet of building space (office, commercial, industrial) available per employee, which can be used to estimate total employment and traffic generation.

- **Employee Density (Warehouse and Storage Space).** This parameter indicates the number of square feet available per employee engaged in warehouse or storage activities at an installation. Only built, fully enclosed, and covered storage space is calculated, with shed or open storage areas excluded from this computation. In describing Army uses of facilities, estimates of the number of employees engaged in warehouse or storage operations are used to determine the portion of the installation workforce in this employee density category.

- **Floor Area Ratio (FAR).** This ratio reflects the magnitude or intensity of building development on a site, and is the ratio of building space to total site area. For example, a 4-story building having a 5,000-square-foot footprint on a 1-acre site would represent a FAR of 0.46 (20,000 square feet of floor space divided by 43,560 square feet (1 acre) of land area).

- **Development Ratio.** This indicator of intensity is based on the amount of developed property in relation to the total amount of property subject to land use planning at a given location. Developed property includes the acreage of not only those specific sites on which structures have been erected, but also immediately adjacent areas capable of being easily served by existing infrastructure elements such as roadways, electrical service, water and sewer, natural gas, heating steam, and telecommunications systems. For purposes of this ratio, developed property includes buildings, roadways, parking lots, and other structures such as storm water retention basins. The developed property indicator is expressed as the ratio of acres of developed property to the whole acreage within a particular planning unit. This indicator is useful to provide a general estimate of the degree of buildout, or potentially full development, that has occurred at a location.

3.4.3 Application of Intensity Categories

Based on conditions at FMC at the time that the BRAC 95 closure decision was announced, the overall use of FMC is characterized as low to medium low intensity. The total floor area of all facilities is approximately 6,083,000 square feet (565,124 square meters) (EDAW, 1996) distributed over 18,520 acres (7,476 hectares), resulting in a FAR of 0.008. This floor space consists of approximately 3,002,000 square feet (278,892 square meters) of housing, and 3,081,000 square feet (286,232 square meters) of non-residential uses (training, industrial, office/administration, commercial, medical, recreation and community uses). The 4,405 installation employees (including permanent party military, DOD and other civilians) occupying the 3,081,000 square feet of general space results in an employee density of 700 square feet per employee. There are 8,955 housing units (including 7,968 enlisted barracks spaces) at FMC, resulting in an overall residential density of 0.46 units per acre. The overall development ratio for the excess property area is approximately 0.08.

3.4.4 Local Reuse Plan and Development of Reuse Alternative Intensities

DOD policy states that the local community's reuse plan (to the extent that it is available and timely) will be used to define the proposed reuse action, and serve as a basis for the required NEPA analysis of reuse options. In August 1997, the Fort McClellan Reuse and Redevelopment Authority (FMRRA) (the predecessor of the FMDC) made available to the Army their Fort McClellan Comprehensive Reuse Plan, Phase 2 Report Preferred Land Use Plan, June 1997 (FMRRA, 1997b). This version of the reuse plan was used to prepare the Reuse Alternatives in the Draft EIS and Final EIS. In December, 1997 the FMDC made available to the Army their final reuse plan entitled "Fort McClellan Comprehensive Reuse Plan, Implementation Strategy", dated November 1997 (FMRRA, 1997d). This final reuse plan (November 1997) was evaluated by the Army and compared to the June 1997 version used in the preparation of the EIS. The development intensities and acreages between the June 1997 and November 1997 plans are similar and both are consistent with the Medium High Reuse Alternative (MHIR) presented later in this subsection. The Implementation Strategy completed in November, 1997 (similar to it's predessor plan the Preferred Land Use Plan completed in June, 1997) describes their final plan for adoption and action by the Commission. The FMDC Plan provides a framework for the reuse and development of FMC through the year 2020 and beyond. The Plan seeks to balance the many interests of the local community with the realities of the market, site, and the existing infrastructure. The Plan's redevelopment focus is on the western part of the installation and includes the NCDP, residential development, a planned retirement community, retailing, a variety of types of employment activity, training facilities, recreation, and areas devoted to several special uses with a majority of the living areas south of Cane Creek and the majority of the working area north of Cane Creek. The general land use categories and acreage presented in the FMDC reuse plan, and utilized in the development of the reuse alternatives evaluated in the EIS, are summarized in Table 3.1 and Figure 2-3. Summary elements of the FMDC (FMRRA) Final Plan are presented in Appendix F. The FMDC Plan does not represent the highest level of development intensity possible, but rather a more probable and attainable intensity level based upon FMDC analysis of the existing market and its ability to absorb additional development, public and private investment requirements, and environmental impacts.

Table 3.1 Summary of FMDC Preferred Land Use Plan Acreage*

Land Use for FMDC Redevelopment Area (Area 1) of FMC	
Land Use Category	**Acreage**
Residential and Retirement	823 acres
Training/Education	202 acres
Office	141 acres
Retail/Commercial	228 acres
Industrial	924 acres
Roads & Infrastructure	2000 acres
Active Recreation	771acres

Passive Recreation/Open Space	2109 acres
Area 1 Subtotal	7,198 acres (approximately 7,200 acres)
Land Use for FMDC Passive Recreation Area (Area 2) of FMC	
Land Use Category	**Acreage**
Passive Recreation and Open Space	11,322 acres
Area 2 Subtotal	11,332 acres (approximately 11,000 acres)
TOTAL FMC DISPOSAL AREA	18,520

* The overall acreage by reuse category is similar between the June 1997 and November 1997 reuse plans. The principal difference between the two plans involves the categorization of roads & infrastructure which were not separated from the other reuse categories in the final plan (November, 1997).

Source: 1) FMRRA, 1997c (FMRRA Preferred Land Use Plan)
2) FMRRA, 1997a (Fort McClellan Reuse Study - Development Program Summary)

The acreages and development intensities of the FMDC Preferred Land Use Plan (June, 1997) were used as the template to establish three reuse intensity alternatives. Each of the three reuse intensity alternatives is based upon the concepts presented in the FMDC Plan. The variations in the three reuse alternatives evaluated in this EIS are variations in the intensity of the redevelopment/reuse of the disposal area. The FMDC reuse plan focuses on the redevelopment of approximately 7,200 acres within the western one-third of FMC Main Post. The remaining two-thirds of FMC are categorized as passive recreation in the final reuse plan. Based upon this redevelopment plan, the EIS establishes two areas (Area 1 and Area 2) which correspond to the 7,200 acre portion slated for redevelopment (Area 1) and the 11,000 acre portion slated as passive recreational area (Area 2). Areas 1 and 2 are depicted in Figure 3-2. A summary of each alternative plan follows, with reuse intensity attributes/characteristics presented on Table 3.2.

3.4.4.1 Area 1 - Redevelopment Area

The Area 1 Redevelopment Area, consists of approximately 7,200 acres and encompasses the area focused on by the FMDC for redevelopment. As detailed in subsection 2.4 and illustrated on Figure 2-3, this area includes the western one-third of FMC including the cantonment area.

Figure 3-2
11 x 17

Table 3.2 DEIS Reuse Alternative's Attributes

Development Parameters for Area 1 (FMDC Redevelopment Area)				
Reuse Characteristic	**MHIR Alternative**	**MIR Alternative**	**MLIR Alternative**	**Remarks**
Residential Population[1]	3,665	2,894	2,600	
Employee Population[1]	13,989	8,992	6,052	
Building Floor Area (SF)	7,190,000	5,857,000	4,858,000	Commercial, Industrial, & Institutional Areas
Employee Density [1] (SF/employee)	514	650	800	Total square feet of non-residential floor area divided by total number of employees.
Floor Area Ratio (FAR)[1]	0.014 (0.04)	<0.01 (0.03)	<0.01 (0.03)	Based on floor area development divided by total acreage in disposal area, less roads/infrastructure. (Based on floor area development divided by Area 1 acreage, less roads/infrastructure).
Development Percentage	25 (60)	23 (55)	22 (52)	Developed property divided by total disposal area acreage (Developed property divided by Area 1 acreage)
Management Practices Established for Area 2 (FMDC Passive Recreation Area) [2]				
Reuse Characteristic	**MHIR Alternative**	**MIR Alternative**	**MLIR Alternative**	**Remarks**
Safety Controls	YES	YES	YES	See subsection 3.4.4.2
Fish & Wildlife Management	YES	YES	NO	See subsection 3.4.4.2
Plant Resources Management	YES	YES	NO	Management Includes Prescribed Burns for MLP Ecosystem (See subsection 3.4.4.2)
Wetlands Protection	Proactive	Proactive	Passive	Wetlands protected per CWA Section 404 (See subsection 3.4.4.2)
Federal Threatened & Endangered Species Protection	Proactive	Proactive	Passive	The gray bat is the only federal listed species at FMC. See subsection 3.4.4.2
Other Species of Concern Management	YES	YES	NO	See subsection 3.4.4.2
Hunting & Fishing	Allowed	Restricted	Restricted	See subsection 3.4.4.2

Timber Management	YES	Limited	NO	See subsection 3.4.4.2

Note: 1 Calculations are based upon application of multipliers established for each intensity indicator to the proposed land use types, locations and acreage specified by the FMDC (FMRRA) Preferred Land Use Plan.

2 Passive recreational use of the approximately 11,000-acre area under the three reuse alternatives involves:

- MHIR Alternative approximates the current level of resource management and public access (See subsection 3.4.4.2.1).
- MIR Alternative incorporates a nature preserve concept with limited public access (See subsection 3.4.4.2.2).
- MLIR Alternative incorporates a revert to natural processes concept (See subsection 3.4.4.2.3).

Source: FMDC (FMRRA) and Parsons Engineering Science, Inc.

3.4.4.1.1 Medium High Intensity Reuse (MHIR) Alternative. The MHIR Alternative directly reflects the land use patterns and use intensity factors that are included in the FMDC Final Land Use Plan (Implementation Strategy) as presented in Appendix F of this EIS. Of the three alternatives considered in this EIS, the MHIR Alternative represents the highest intensity reuse concept for the disposal area. Since the FMDC Plan is based on higher-growth scenarios and will require substantial incentives to achieve, it represents the highest potential level of development that is likely to occur at FMC in the foreseeable future. The two additional EIS alternative reuse plans, as presented below, reflect lower increments of development that could occur.

The FMDC Plan provides for a balance of public and private reuses for the excess property, including residential, office, retail, industrial, training/education, recreation and open space uses; and, retention of certain community facilities. Approximately one-half of the existing 6,083,000 square feet of building space is proposed for retention, including the Post Headquarters and adjacent administration buildings; consolidated maintenance facility; warehouse district; Noble Army Hospital; the Military Police School facility; Chemical School facilities; selected instructional, recreational and housing facilities; the Dependent School; the Post Exchange and Commissary. Less than 7,200 of the 18,520 acres comprising the BRAC disposal area are proposed for development, with the remaining area reserved for passive recreation and open space.

The intent of the MHIR Alternative is to create a mixed-used development with a series of identifiable neighborhoods, and a diversified employment base. The alternate includes 1,575 housing units of which approximately two-thirds are proposed as retirement units; 590,000 square feet of retail space; 1,000,000 square feet of office space; 1,100,000 square feet of training and education space; 4,500,000 square feet of industrial space; and large expanses of open space. Some of the existing family housing would be retained, including the historic officers quarters around Buckner Circle. All of the existing residential areas are proposed for continued residential use, with an area reserved for a future residential retirement community north of Yahoo Lake. Passive and active recreation areas, including three golf courses, are principally associated with the residential neighborhoods in the area south of Cane Creek.

Creation of an employment base is an important goal of the FMDC Plan. Implementation of the MHIR Alternative would generate approximately 14,000 jobs, including a mixture of retail, office, service and industrial jobs. A new “town center” is proposed for the central portion of the reuse area focusing on the existing commercial area around the Post Exchange and Commissary. Other new retail and commercial centers are proposed along and near Highway 21. The approximate 900 acres proposed for industrial development are concentrated in the interior of the cantonment area, centering around the installation’s existing industrial and warehouse area. An education complex is proposed in the central portion of the cantonment area focusing on the existing Military Police School and adjacent facilities along Summerall Gate Road.

There are several constants under all three EIS reuse alternatives. For example, the eastern portion of the disposal area (approximately 11,000 acres) is proposed for “open space” uses, with provisions also

made for the expansion of Lagarde Park in the western cantonment. In addition, separate sites totaling 409 acres are reserved for the Alabama National Guard and Army Reserve , specific sites are listed on Table 2.1. Each of the reuse alternatives includes provisions to accommodate the programmed and partially funded eastern highway by-pass which would transect the western portion of the cantonment and connects Highway 21 and Highway 431 to I-20. The environmental impacts associated with the construction of this by-pass are being evaluated by a separate NEPA analysis being performed by the Alabama Department of Transportation. Another major interior roadway, which partially follows the course of Summerall Gate Road and connects with Highway 21 north of Galloway Gate, is also proposed in each reuse alternative.

3.4.4.1.2 Medium Intensity Reuse (MIR) Alternative. The MIR Alternative is based on application of the same land use location patterns and acreage allocations as defined under the MHIR Alternative and are consistent with the land uses in the FMDC Plan. Under this alternative the number of housing units would decrease to 1,248. All other land uses would also be developed at a lower density, which results in total employment within the reuse area decreasing to approximately 9,000 as a result of lower employee density and FAR.

3.4.4.1.3 Medium Low Intensity Reuse (MLIR) Alternative. The MLIR Alternative is also based on the same land use location patterns and acreage allocations as defined under the MHIR and MIR alternatives. Under this alternative the number of housing units decrease to 1,150. All other land uses would also be developed at a lower density, which results in total employment within the reuse area decreasing to approximately 6,000 as a result of lower employee density and FAR.

3.4.4.2 Area 2 - Passive Recreation Area

The Area 2 Passive Recreation Area, consists of approximately 11,000 acres and encompasses the area east of the FMDC redevelopment area as illustrated on Figure 2-4 and described on Table 3.2. The FMDC Preferred Land Use Plan has designated this entire area for passive recreation. Passive recreational activities can include a wide variety of activities. Three levels of passive recreational reuse of this parcel, which represent reasonably foreseeable future actions, are evaluated in this EIS. These three reuse intensity alternatives are incorporated as part of the overall MHIR, MIR, and MLIR reuse alternatives.

FMDC Final Reuse Plan includes the establishment of a wildlife refuge within Area 2. USFWS is working with FMDC and the Army and plans to establish an ecosystem refuge within Area 2. The proposed Mountain Longleaf National Wildlife Refuge is anticipated to be developed and maintained by the USFWS in partnership with the ADCNR - GFD on approximately 10,000 - 12,000 acres of unique habitat within the FMC disposal area. Although the boundaries and operational details of the proposed wildlife refuge have not been determined, the development of the wildlife refuge is expected to be consistent with the MHIR and MIR alternatives for Area 2 detailed in the following paragraphs. The National Wildlife Refuge may include some of the passive recreation areas in FMDC's reuse plan that are reflected in Area 1 of Figure 3-2.

3.4.4.2.1 Medium High Reuse (MHIR) Alternative. The MHIR Alternative for the passive recreation area (Area 2) includes human safety management, biological resources management and public access levels similar to those currently in place at FMC. Management activities will include:

- **Human Safety Management.** The area will be managed to facilitate the safe use of the area and surrounding areas. Examples of safety management include: 1) natural or incidental fires occurring in the area would be controlled to prevent damage to surrounding areas, and 2) exposed UXO, in public use areas will be disposed of properly by trained Explosive Ordnance Disposal (EOD) personnel.

- **Fish & Wildlife Management.** Fish and wildlife management practices will be comparable with current procedures as presented in the FMC Integrated Natural Resource Management Plan (FMC, 1991).

- **Plant and Vegetation Management.** The forest and plant communities will be actively managed to promote the health and well being of the plant communities. In particular, a prescribed burn program will be instituted/continued to maintain the Mountain Longleaf Pine (MLP) ecosystem located in portions of this area.

- **Wetlands Management.** Wetlands management will focus on the protection and enhancement of wetland communities in the area. Existing installation management procedures would be continued.

- **Endangered Species Management.** Federal threatened and endangered species (gray bat) may forage in this area of FMC and foraging habitat will be actively managed, using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a).

- **Other Species of Concern Management.** Species of concern, including state listed species as well as "Special Interest Natural Areas", will be actively managed in consultation with the Alabama Department of Conservation and Natural Resources — Alabama Natural Heritage Program (ADCNR-ANHP), using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a).

- **Hunting & Fishing Activities.** Public hunting, fishing, hiking and related activities will be allowed in all areas determined to be safe for such uses.

- **Timber Management.** Timber management activities, including the regulated harvest of timber, will continue. Forestry operations will adhere to Alabama's Best Management Practices for forestry and will use procedures similar to those established in the FMC Integrated Natural Resource Management Plan which includes the use of prescribed burning in the MLP community (FMC, 1991).

3.4.4.2.2 Medium Reuse (MIR) Alternative. The MIR Alternative for the passive recreation area (Area 2) includes human safety management and biological resources management at levels similar to those currently in place at FMC. The area would be managed as a nature preserve area with limited public access. Management activities will include:

- **Human Safety Management.** The area will be managed to facilitate the safe use of the area and surrounding areas. Examples of safety management include: 1) natural or incidental fires occurring in the area would be controlled to prevent damage to surrounding areas, and 2) exposed UXO, in public use areas will be disposed of properly by trained EOD personnel. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

- **Fish & Wildlife Management.** Fish and wildlife management practices will be comparable with current procedures as presented in the FMC Integrated Natural Resource Management Plan (FMC, 1991). As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

- **Plant/Vegetation Management.** The forest and plant communities will be actively managed to promote the health and well being of the plant communities. In particular, a prescribed burn program will be instituted/continued to maintain the Mountain Longleaf Pine (MLP) ecosystem located in portions of this area. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

- **Wetlands Management.** Wetlands management will focus on the protection and enhancement of wetland communities in the area. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

- **Endangered Species Management.** Federal threatened and endangered species (gray bat) may forage in this area of FMC and foraging habitat will be actively managed, using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a). As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

- **Other Species of Concern Management.** Species of concern, including state listed species as well as "Special Interest Natural Areas", will be actively managed in consultation with the ADCNR - ANHP, using procedures similar to those detailed in the current FMC Endangered Species Management Plan (FMC, 1996a). As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

- **Hunting & Fishing Activities.** Public hunting, fishing, hiking, and related activities would not be allowed on most portions of this area. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

- **Timber Management.** Active timber management activities would be limited but would still include the use of prescribed burning in the management of the MLP community. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative as discussed in subsection 3.4.4.2.1.

3.4.4.2.3 Medium Low Reuse (MLIR) Alternative. The MLIR Alternative for the passive recreation area (Area 2) includes human safety management, with no active biological resources management and limited public access. Public use areas would be primarily roads transacting the area. The management activities would focus on a revert to natural processes concept with limited human intervention. Management activities will include:

- **Human Safety Management.** The area will be managed to facilitate the safe use of the area and surrounding areas. Examples of safety management include: 1) natural or incidental fires occurring in the area would be controlled to prevent damage to surrounding areas, and 2) exposed UXO, in public use areas will be disposed of properly by trained EOD personnel. As illustrated on Table 3.2, this level of management will be similar to the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).

- **Fish & Wildlife Management.** Active fish and wildlife management practices would cease and the area would be left to natural processes. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).

- **Plant and Vegetation Management.** Active forest and plant management activities would cease and the area would be left to natural processes. No prescribed burn program would be implemented. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2.

- **Wetlands Management.** Wetlands protection will focus on adhering to Section 404 requirements of the CWA. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).

- **Endangered Species Management.** Federal threatened and endangered species known to occur in this area of FMC (gray bat) will be protected in accordance with the ESA; however management of these species would be accomplished through more passive management activities. These more passive activities would not include the more pro-active features detailed in the current FMC Endangered Species Management Plan (FMC, 1996a). As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).

- **Other Species of Concern Management.** Active management for Species of concern including state listed species as well as "Special Interest Natural Areas" will cease and the area would be left to natural processes. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1) and the MIR Alternative (as discussed in subsection 3.4.4.2.2).
- **Hunting & Fishing Activities.** Public hunting, fishing, hiking, and related activities would not be allowed on most portions of this area. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1), but similar to the level of management provided in the MIR Alternative (as discussed in subsection 3.4.4.2.2).

- **Timber Management.** Active timber management activities would not occur and no prescribed burning to maintain the MLP community would occur. As illustrated on Table 3.2, this level of management will be different than the level of management provided under the MHIR Alternative (as discussed in subsection 3.4.4.2.1), and different than the level of management provided in the MIR Alternative (as discussed in subsection 3.4.4.2.2).

3.5 ALTERNATIVES NOT ADDRESSED IN DETAIL

High Intensity Reuse (HIR) Alternative. The High Intensity Reuse Alternative (as noted in subsection 3.4.2) is not considered to be feasible for implementation at FMC considering the size of the total disposal area; the physical limitations of major portions of this land area; the ability of the region to accommodate and absorb new development based on economic conditions; the high cost of UXO removal and environmental remediation considerations involved in more intense development; and site development constraints based upon natural resources constraints such as soil types and condition, geology, and slopes. Application of use levels contemplated under a HIR Alternative could potentially jeopardize other existing and potential development projects, and general local and regional economic conditions.

Low Intensity Reuse (LIR) Alternative. This EIS does not consider a Low Intensity Reuse (LIR) Alternative, since a major goal of the FMDC is to provide employment opportunities and an economic base to replace that which is lost through the closure of FMC. The LIR Alternative would result in a large number of potential development areas not being used, which would result in the total amount of redevelopment at FMC failing to meet the desired and anticipated level of economic redevelopment planned by the FMDC. In addition, considering the size of the FMC disposal area, and the extent of lands that have already been developed within the existing cantonment area, there is sufficient land available for the provision of open space and other low intensity uses under all three of the reuse alternatives that are addressed in this EIS.

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Affected Environment

4.1 INTRODUCTION

This section describes the existing natural, cultural, manmade and socioeconomic environments at Fort McClellan (FMC Main Post), Alabama as they existed in 1995. These conditions, which are described by resource group, serve as a baseline for the subsequent identification and evaluation of the environmental and socioeconomic impacts resulting from the proposed action as discussed in Section 5.

4.2 LAND USE

This section describes the installation in terms of regional geographical setting and location, land and air space use on the installation and within the surrounding region.

4.2.1 Regional Geographic Setting and Location

FMC Main Post, noted as FMC throughout this document, consists of approximately 18,929 acres located in the heart of Calhoun County, Alabama, adjacent to the City of Anniston and Alabama Highway 21. Two other adjacent military functions include Pelham Range and Anniston Army Depot. The regional location and surrounding vicinity of FMC are illustrated in Figure 2-1. On a regional scale, FMC is within a two-hour drive of several metropolitan areas, including Gadsden and Huntsville to the north, Montgomery to the south, Atlanta to the east, and Birmingham to the west. FMC adjoins the City of Anniston to the south and west, and extends 6 miles to the northeast toward Jacksonville, Alabama, along the Choccolocco Mountain Range. The cantonment area is surrounded on its southern and eastern sides by the Choccolocco Mountains. The remaining acreage on FMC consists of ranges, training areas, and bivouac sites. Lateral ridges extend from the main range in a westerly direction, rising from 700 to 2,063 feet above sea level.

4.2.2 Installation Land and Airspace Use

Overall land use at FMC is tabulated in Table 4.1. The largest portion of FMC is used for training and maneuvers with approximately 10,700 acres, or 56.7 percent of the installation, being set aside for these purposes. The second largest portion of FMC is devoted to range and impact areas consisting of 5,400 acres, or 28.5 percent of the installation.

The cantonment area contains approximately 2,500 acres, or 13.2 percent of the total land area at FMC. Land use in the cantonment area is divided into the following eight functional categories: 1) training and operations; 2) supply, storage and public works; 3) community facilities; 4) administration; 5) troop

housing; 6) family housing; 7) recreation; and 8) open space. Existing cantonment area land use is portrayed in Table 4.2. The remaining land at FMC consists of lake recreational areas, a former landfill, and the Reilly Airfield (closed).

Table 4.1 Land Use, Fort McClellan

Areas	Approximate Area (acres)	Percent of Total Area
MAIN CANTONMENT AREA *	2,500	13.2
RANGE AND IMPACT AREA	5,400	28.5
TRAINING AND MANEUVER AREA	10,619	56.1
OTHER AREAS		
Landfills (Landfill 1, 2, and 3 closed; 4 open)	150	0.8
Reilly Airfield (closed)	45	0.2
Reilly Lake Rec. Area	35	0.2
Yahoo Lake Rec. Area	180	0.9
TOTAL	**18,929**	**100.0**

Note: * See Table 4.2 for detailed land use in this area.

Source: FWEC, 1996

Table 4.2 Cantonment Area Land Use, Fort McClellan

Land Use Category	Approximate Area (acres)	Percent of Total Area
Family Housing/Officer Quarters	175	7.0
Troop Housing	162	6.5
Commercial Services	60	2.4
Community Facilities	85	3.4
Administration	45	1.8
Training and Operations	250	10.0
Supply, Storage, and Public Works	231	9.2
Recreation Facilities	365	14.6
Open Space	955	38.2
Lakes	10	0.4
Leased Area (Alabama Army National Guard/Alabama Military Academy)	162	6.5
TOTAL	**2,500**	**100.0**

Source: FWEC, 1996.

The main administrative complex in the cantonment area is located on "The Hill" and consists of the post headquarters and many of the administrative support functions. Officer housing is concentrated around Buckner Circle adjacent to the north of the post headquarters, with family housing and other officers quarters located between the post headquarters and Highway 21. Training and education comprise a major land use consisting of: the Military Police School, the Chemical School, the DOD Polygraph Institute and the Training Brigade. Recreational uses, including the Cane Creek Golf Course, and open space comprise one-half of the cantonment area with a major outdoor recreation area along Summerall

Gate Road. Other major uses include community facilities and commercial services, which focus on the Commissary/Exchange complex located in the central portion of the cantonment.

FMC also contains the Reilly Airfield (closed), located north of cantonment area, which is no longer used for fixed-or-rotary winged aircraft operations. The airfield, which was closed prior to 1988 by the Federal Aviation Administration (FAA) because of inadequate glide ratio, is currently used for defensive driving training by the Military Police School. Although FMC does not have a FAA designated Military Operations Area, the installation does have some restricted airspace, since the FAA prohibits civilian aircraft from flight over portions of the installation. For example, overflight of the Chemical Defense Training Facility, which is located east-southeast of Reilly Airfield, is prohibited to all aviation units training under the operational control of supported units at FMC. Currently, there are four authorized helicopter landing zones on FMC (FTM Regulation, 350-2).

4.2.3 Surrounding Land and Airspace Use

Land Uses. FMC is bordered by the City of Anniston to the south and west, and by unincorporated Calhoun County to the north and east (Figure 4-1). State Highway 21 borders the installation on the west from Summerall Gate northward. Land use adjacent to the west of the installation along Highway 21 is dominated by a variety of commercial uses on the west side of the highway, including the Lenlock Shopping Center. Other major uses along the west side of Highway 21 include the Anniston Middle School and Calhoun County Board of Education which are located near the Summerall Gate. The few private parcels on the east side of Highway 21 bordering the installation are used for community facilities, including: Lagarde Park/Lenlock Community Center, Anniston Museum of Natural History, a City of Anniston fire station and the Coosa Valley Juvenile Detention Center.

Low density single family residential and developing residential areas characterize land use adjacent to the south of the installation in the City of Anniston. Areas to the east and north within Calhoun County are characterized by rural uses, dominated by agricultural and open space uses with scattered residential development. The Talladega National Forest borders a leased portion of the installation (Choccolocco Corridor) to the east.

The Anniston Land Use Plan was prepared by the East Alabama Regional Planning and Development Commission (EARPDC), which is the Metropolitan Planning Organization for portions of Calhoun and Talladega Counties and is responsible for regional planning for the surrounding seven county area. Economic, transportation, demographic and other studies are prepared by the agency on their own accord or by special request. The Land Use Plan, prepared in the latter 1980s, consists of six individual neighborhood plans and an executive summary. The Plan notes that the Golden Springs Neighborhood, which borders the majority of the southern boundary of FMC, is the fastest growing residential area of the city. The land use plan for this neighborhood reflects a continuation of orderly, low density residential development with recognition of the natural development constraints (steep slopes) within the area (EARPDC, 1987). *Envison 2010*, a more recent strategic plan prepared for the city, contains strategies for achieving community goals in respect to economic development, downtown preservation, neighborhood preservation, public safety and environmental quality (Anniston, 1992).

Present and approved future land use developments within the immediate surrounding area are discussed in the cumulative impact analysis in subsection 5.5, Cumulative Impacts.

Zoning. The City of Anniston has a zoning ordinance, subdivision ordinance and Comprehensive Plan in effect, while Calhoun County has no zoning/subdivision regulations nor land use planning in force. State enabling legislation provides for municipal extra-territorial subdivision and code enforcement powers within a 5-mile radius of a municipality's boundaries. However, enabling legislation does not provide for municipal extra-territorial planning and zoning powers. Thus, zoning and planning are not in effect within those unincorporated areas of Calhoun County bordering the installation. Recent State legislation (SB. 639) establishing the Fort McClellan Development Commission does not include zoning enforcement among the powers of the commission.

Figure 4-1 Generalized Adjacent Land Use
8 1/2 x 11 (B & W)

Anniston's Zoning Ordinance contains 18 zoning districts, ranging from Agricultural and Conservation Districts to Residential, Commercial and Industrial Districts. Land adjacent to the south of the installation within Anniston is primarily zoned "R-1" Residential District (Figure 4-2), which allows low-density, single family dwelling units with a minimum lot size of 12,750 square feet. The area fronting the west side of Highway 21 is zoned primarily "A.S.C.", Area Shopping Center District (Anniston, 1981).

The City of Oxford, located adjacent to Anniston on the south, has zoning and subdivision ordinances in effect, but no land use plan. Located along the I-20 corridor, Oxford has experienced more rapid growth and development than Anniston during the last decade.

Airports. The only airport in the county which had regularly scheduled commercial air service was the Anniston-Calhoun County Airport located four miles south of Anniston between I-20 and Highway 21 (This service has been discontinued.). This airport, with a 7,000-foot lighted runway, serves as the general aviation airport for the area. Other airports in the area include Gadsden Municipal Airport, Talladega Municipal Airport, and one small airport - McMinn, south of Weaver.

4.2.4 Fort McClellan Main Post Training Areas

The mission of the U.S. Army Chemical and Military Police Center and FMC is to train individuals in common soldier tasks and both basic and advanced tactical skills required for Chemical Corps and Military Police personnel. FMC also provides this training to DOD personnel from all branches of the service, other government agencies, and members of international nation's Armed Forces.

To accomplish this mission, FMC uses both classroom instruction and "hands-on" training in the field. This field training is performed at ranges, training areas, and bivouac sites located throughout FMC. FMC currently has 15 active ranges, 20 active training areas, and 8 active bivouac sites to support this mission. The locations of the ranges, training areas, and bivouac areas on FMC are depicted on Figure 4-3.

The Directorate of Plans, Training, Mobilization, Security, and Reserve Components (DPTMSEC&RCS), Headquarters, FMC is responsible for overall control of all the ranges, training areas, and bivouac sites at both FMC and Pelham Range. All unit assignments of and use of these areas must be approved by DPTMSEC&RCS. The DPTMSEC&RCS is the proponent for FMC Regulation (FTM Reg) 350-2, Training: Range and Terrain. This regulation defines the roles and responsibilities relating to ranges and training areas and the procedures that must be followed for scheduling, safety, firing activities, and lists specific limitations and requirements for each area.

Every range, training area, and bivouac site at FMC is classified as a restricted area in FTM Reg 350-2. The use and access of each of these areas is strictly controlled and all individuals or units must request and receive prior approval of DPTMSEC&RCS prior to entering or using any of these areas.

4.2.4.1 Active Ranges

There are 15 active ranges on FMC. The DPTMSEC&RCS defines a range as a location where live ordnance is expended. This ordnance can be grouped in the following general categories: ball ammunition from direct fire weapon systems such as rifles, pistols, and machine guns; explosive ordnance from direct fire weapon systems such as 40mm grenades, M-72 LAW, and AT-4s; detonation of explosives such as C-4/TNT, detonation cord, and M-4 bursters; tactical generation of smokes and obscurants; and indirect firing points for weapons systems such as artillery and mortars. Several ranges are defined as multi-purpose and can be used for both explosive and non-explosive ordnance. Table 4.3 lists the active ranges at FMC (FTM Reg 350-2, 195).

Figure 4-2 Generalized Adjacent Zoning
8 1/2 x 11 (B & W)

Figure 4-3 Training Areas, & Ranges, Main Post
11 x 17 (B & W)

Table 4.3 Active Ranges, FMC Main Post

Range	Proponent	Weapons Used	Purpose
Range 12 Competitive Pistol	ALARNG	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: .22-cal Machine Gun: Machine gun (1960's) Shotgun: 12 gauge--no slugs	Weapons familiarization and qualification
Range 13 Qualification Pistol (USMC) Range	USMC	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge-no slugs	Weapons qualification
Range 18 Down Range Feedback Range	Training Brigade	Rifle: M-16, day/night phase, tracer, M-103 Springfield, and M-1 Grenade Machine Gun: machine gun.	Weapons familiarization and qualification; tactical skills training
Range 19 Qualification Pistol Range	USAMPS	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge--no slugs	Weapons qualification
Range 20 Infiltration Course	Training Brigade	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: M-60 with tracer Shotgun: 12 gauge--no slugs Other: dynamite, TNT, and C4	Individual tactical skills training
Range 21 Field Fire Range (Dry Fire, Protective Mask and Night Fire)	ALARNG	Rifle: M-16 with tracer	Individual tactical skills training
Range 22 Zero Range (25m)	Training Brigade	Rifle: M-16 with tracer	Weapons zero prior to qualification
Range 23 Trainfire Range (Record, M-16 Qualification, NBC and Night Fire)	ALARNG	Rifle: M-16 with Tracer Other: Misc artillery (date unknown)	Individual tactical skills training
Range 24a Multi-Purpose Range (Smoke, Demolition, and Flame Field Expedient (FFE))	USACMLS	Rifle: M-14, M-16, and other rifles Including tracer round) Machine Gun: machine guns (including tracer rounds) Other: C4, TNT, M-4 burster, blasting caps, simulators, trip flares, detonation cords, & smoke-producing munitions/ equipment	Individual skills training; open detonation; smoke generation training
Range 25 Known Distance Range (100-600 yards)	ALARNG	Rifle: M-14, M-16, and M-1 (including tracer rounds) Machine Gun: M-60 (including tracer rounds) Other: Artillery rounds.	Individual weapons training
Range 26 Live Fire and Maneuver Range	Training Brigade	Rifle: M-16 (since 1983) Other: Possible historical use of large caliber fused ordnance and large caliber weapons	Individual and small unit tactical skills training
Range 27 Special Operations Range (Stress Pistol and Shotgun)	USAMPS	Pistol: 9mm; .38-cal; .45-cal Rifle: M-16 (1983-1989) Machine Gun: M-60 and other Machine Guns Shotgun: 12 gauge (no slugs)	Advance MP training

Table 4.3 Active Ranges, FMC Main Post			
Range	**Proponent**	**Weapons Used**	**Purpose**
		(1989 to present)	
Range 29 Weapons Demonstration and U.S. Weapons Range	Training Brigade	Pistol: .38-cal; .45-cal; 9mm Rifle: M-16 Machine Gun: M-60 Other: C-4, TNT, AT-4 Rocket, M-136, M-203, smoke, M-72 LAW, as well as the potential for historical use of fused ordnance	Demonstrations of weapon systems
Range 32 Hand Grenade Range	Training Brigade	Other: Hand grenades (practice and live)	Individual weapons training
Skeet Range	Skeet club	Rifle: Shotgun:.410; .28; .20; .12 gauges	Recreational shooting
Source: FTM Reg. 350-2, 20 October 1995			

4.2.4.2 Active Training Areas

There are currently a total of 20 active training areas. These training areas are diverse in nature, each structured to train and test individual and unit tactical skills, operations, and capabilities. Many of the training areas offer force-on-force tactical training that include the use of blank ammunition and artillery simulators. Others are used in a non-tactical mode, such as the confidence course, the gas chamber, and the basic compass course. Table 4.4 lists the active training areas and their primary use for FMC.

Table 4.4 Active Training Areas, FMC Main Post		
Training Area	**Proponent**	**Purpose**
TA-8 End-of-Cycle Testing	Training Brigade	Tests individual knowledge of basic soldier skills
TA-9 Military Operations in Urbanized Terrain (MOUT)	USAMPS	Classroom instruction and practical exercises in military operations in cities; clear and secure buildings
TA-10 Compass Course	USAMPS	Individual training in land navigation
TA-11 Gas Chamber	USACMLS	Nuclear, Biological, and Chemical (NBC) training and protective mask confidence course
TA-15 MP Land Navigation	USAMPS	Individual training in basic land navigation
TA-16B MP Land Navigation	USAMPS	Individual and small group training in orienteering
TA-16C USMC NBC Defense	USMC	Individual and unit training in NBC defensive operations
TA-16G Offensive Tactics and Combat Indoctrination Course	ALARNG	Individual and unit training in offensive operations
TA-19B Chemical NCO Academy	Chemical NCO Acad.	NBC situational training
TA-25 Physical Security	USAMPS	Individual training in establishing physical security of a site

Table 4.4 Active Training Areas, FMC Main Post		
Training Area	**Proponent**	**Purpose**
TA-28 Individual Tactical Training Blank Fire and Maneuver Range	Training Brigade	Individual and unit training on using Fire and Maneuver tactics in a tactical scenario. Blank M-16 rounds used.
TA-32 Chickasaw Range-NBC	Training Brigade	Training of NBC operations
Leadership Reaction Course	DPTMSEC	Ten situational events to test and develop leadership skills
Confidence Course	DPTMSEC	Confidence building and physical conditioning training
Mock Confinement Facility	USAMPS	Training MPs in the procedures for processing/handling military prisoners
Obstacle Course	DPTMSEC	Physical fitness and conditioning training
POW Compound	DPTMSEC	Training MPs in the procedures for processing/handling enemy prisoners-of-war
Chemical Defense Training Facility	USACMLS	Chemical defense training
Reilly Airfield	DPTMSEC	Evasive driving; Air Force radiological survey training
End-of Cycle Testing (Chemical)	USACMLS	Tests individual knowledge of basic soldier skills
Bayonet Assault Course	DPTMSEC	Individual bayonet training
Source: FTM Reg. 350-2, 20 October 1995		

On those training areas where blank ammunition is used, a potential exists for unfired blanks to be present in those areas. Those blanks will primarily be 7.62mm and 5.56mm. While blank ammunition does not have a projectile, they are considered dangerous to a range of 20 feet when fired from a weapon due to the round's wadding (FTM Reg 350-2). Those blanks could pose a potential threat to personnel if detonated in an unauthorized manner, such as being placed in a fire.

Many of the training areas are used for Nuclear, Biological, and Chemical (NBC) training with at least two sites, the gas chamber and TA-32, using tear gas (CS). Live chemical agents are only used in the Chemical Defense Training Facility (CDTF) under strict security and operational controls; they are not currently (see subsection 4.9 on historical use) used on ranges or in training areas (ESE, 1998b). Simulants are used in training to cause positive readings on tactical instrumentation/test kits used by soldiers in NBC detection and decontamination training.

4.2.4.3 Bivouac Sites

There are 8 active bivouac sites on FMC These sites vary in capacity from one company to a battalion size element. Table 4.5 lists the bivouac sites and the capacities of each site.

Table 4.5 Bivouac Sites at FMC			
BIVOUAC Sites	**Proponent**	**Capacity**	**Primary Use**
B-25	ALARNG	Company (+)	National Guard training site
B-30	ALARNG	Battalion	Multi-purpose
B-31/FTX	ALARNG	Battalion	National Guard training site; field training exercises
B-32/FTX	ALARNG	Battalion	National Guard training site; field training exercises
B-41	Training Brigade	Company	Training Brigade; multi-purpose

Table 4.5 Bivouac Sites at FMC			
BIVOUAC Sites	**Proponent**	**Capacity**	**Primary Use**
B-42/FTX	Training Brigade	2-Companies	Training Brigade; field training exercises
B-43/FTX	Training Brigade	Company	Training Brigade; field training exercises
Trench Hill	ALARNG	2-Companies	Multi-purpose
Source: FTM Reg. 350-2, 20 October 1995			

Four of the bivouac sites on FMC are also classified as a Field Training Exercise (FTX) areas. Old fighting positions (foxholes) could be expected in these areas, as well as old field latrines and garbage burial pits. A potential would also exist for unfired blank small arms ammunition used in the FTX areas.

4.2.4.4 Inactive Ranges And Training Areas

Several of the ranges and training areas are no longer in use. These include Ranges 16, 17, and 28. DPTMSEC&RCS personnel stated that Ranges 16 and 17 had a high concentration of unexploded ordnance (UXO), both surface and subsurface.

The FTM Reg 350-2 also identifies permanent dud impact areas within certain ranges. These sites are marked by red and black-on-white signs and entry is strictly prohibited. The regulation also identifies contaminated areas relating to ranges and training areas. These areas are at the backside of Range 24-A (surrounded by a 10-foot fence), Reservoir Ridge in area 16-D (fenced area), and the area behind and between Ranges 16 and 18 (FTM Reg 350-2).

4.3 AIR QUALITY

4.3.1 National Issues

The Clean Air Act (CAA) of 1963, as amended, has authorized the U.S. Environmental Protection Agency (USEPA) to develop and implement programs to protect human health and enhance the air quality. Through this authorization, USEPA has developed and implemented many programs. The most important program has been the establishment of National Ambient Air Quality Standards (NAAQS) which set specific acceptable concentrations for six criteria pollutants (sulfur dioxide, carbon monoxide, ozone, nitrogen oxides, lead, and inhalable particulate matter). For each of these six pollutants, USEPA has set health-based or "primary" standards to protect public health, and welfare-based or "secondary" standards to protect the environment (crops, vegetation, wildlife, buildings and national monuments, visibility, etc).

USEPA is required by the CAA to review the health and welfare-based standards at least once every five years to determine whether revisions to the standards are necessary to continue to protect public health and the environment. An area which meets the NAAQS for a pollutant is classified as an "attainment" area for that pollutant, whereas an area which does not meet the NAAQS for a pollutant is classified as a "nonattainment" area for that pollutant. Fort McClellan is located in an attainment area for all criteria pollutants.

Compliance with these NAAQS is a continuing goal of the additional programs implemented by USEPA. The programs most relevant to the proposed action include: the Prevention of Significant Deterioration (PSD) program, designed to allow growth in areas while maintaining good air quality in attainment areas where pollutant concentrations are below the NAAQS; the New Source Performance Standards (NSPS) program designed to ensure that new sources of air pollution are well controlled; and, the Title V - Federal Operating Permit program designed to ensure consistency through a national air permitting program.

Through the CAA, Congress has stated that the prevention and control of air pollution belongs at the state and local level. USEPA has delegated enforcement of the PSD, NSPS and Title V programs to the State of Alabama. The State of Alabama has adopted the NAAQS by reference. The Alabama Department of

Environmental Management (ADEM) has implemented the Title V Operating Permit program through ADEM Administrative Codes 335-3-15 and 335-3-16.

On November 27, 1996 the USEPA announced a proposal for two new regulations regarding the NAAQS, one for ozone and one for particulate matter. The proposal for particulate matter includes adding a category of 2.5 microns or less (PM2.5) to the current category of 10 microns or less (PM10). A court order required USEPA to finalize a particulate matter standard by mid-July of this year, and USEPA committed to a court to do the same for ozone. On July 16, 1997 USEPA administrator Carol M. Browner announced the revised standards for ozone (smog) and particulate matter. President Bill Clinton, also on July 16, 1997, signed a memorandum approving the issuance of the new air quality standards and directing the USEPA to complete their rulemaking by December 31, 1998 (see Appendix G).

4.3.2 Regulatory Compliance and Classification

Under the authority of the Alabama Administrative Code, Division 355-3, the ADEM requires that an annual air emissions inventory be submitted. The air emissions inventory is used initially to determine if additional air pollution sources require permitting and to assess fees. A comprehensive Air Pollution Emission Statement was developed for Fort McClellan as required by ADEM by CH2M Hill for the base year 1995. Actual emissions for 1995 are provided in Table 4.6. It should be noted that the required air emissions inventory is for stationary sources only and does not include mobile sources. A mobile source emissions inventory has never been conducted at Fort McClellan (For impact analysis purposes, the baseline mobile source emissions were estimated based upon a total baseline traffic volume of approximately 29,375 ADT; see subsection 4.7.5).

Based on the stationary emissions inventory, the predicted potential to emit for sulfur oxide (SO_x) and nitrogen oxide (NO_x) exceed the major source threshold of 100 tons per year (CH2M Hill, 1997). In addition, Fort McClellan's potential emissions are above the 25 tons per year (TPY) threshold for hazardous air pollutants (HAPS). It should be noted that fugitive sources are not used to determine if a facility is a "major" source. They are only included for determining fees for "major" sources.

Table 4.6 Fort McClellan 1995 Summary of Stationary Source Air Emissions

Source	Criteria Pollutants (TPY)					Total HAPS (TPY)
	PM_{10}	SO_2	NOx	CO	VOCs	
Boilers (Commercial)	0.18	0	1.52	0.32	0.058	0.008
Boilers (Industrial)	0.68	0	6.91	1.73	0.137	0.019
Generators and Pumps	0.08	0.38	3.18	2.05	0.24	0.005
Miscellaneous Heating Units	1.01	1.38	8.5	1.79	0.45	0.06
Incinerators	0.083	0.009	0.11	0.051	0.007	0.14
Fuel Storage	0	0	0	0	6.34	0.089
Painting Operation	0.0064	0	0	0	1.21	0.11
Degreasing	0	0	0	0	0.138	0
Woodworking	0.453	0	0	0	0	0
Sterilizer	0	0	0	0	0.0082	0.0082
Welding	0.052	0	0.002	0.002	0	<0.001
Plastic Forming	0	0	0	0	0.32	0.32
Cooling Towers	2.11	0	0	0	0	0
Fugitive Sources						

Table 4.6 Fort McClellan 1995 Summary of Stationary Source Air Emissions						
Source	**Criteria Pollutants (TPY)**					**Total HAPS (TPY)**
	PM_{10}	**SO_2**	**NOx**	**CO**	**VOCs**	
Chemical Usage	0	0	0	0	17.4	2.27
Chlorine	0	0	0	0	0	3.68
Pesticides/Herbicides	0	0	0	0	0.39	0.039
Landfill	12.3	0	0	0	1.92	0.111
Firefighter Training	1.22	0.076	0.46	6.46	2.28	0
Prescribed Burning	293	0	45	3,938	78.8	0
Wastewater Treatment	0	0	0	0	0.45	0
Fog Oil Generators	2.42	0.016	0.203	10.2	239	0.031
Total Emissions (including fugitives)	**313**	**1.86**	**66**	**3,960**	**349**	**6.89**
Total Emissions (excluding fugitives)	**4.66**	**1.77**	**20.2**	**5.9**	**8.91**	**0.759**
Note: Data presented is limited to stationary source air emissions. Mobile source baseline data is presented in subsection 4.3.2.						
Source: CH2M Hill						

4.3.3 Permits

ADEM Admin Code 335-3-15-.02-10 (effective 10 Dec 96) states that a facility that is a "major" source based on potential to emit, but whose actual emissions (excluding fugitive sources) are less than 50% of the “major” source thresholds will be considered a Synthetic Minor Source. The rule does not require a separate permit, but does require documentation to be made available on request to prove compliance. All previously issued permits will continue to be enforced. This ruling reduces paperwork for facilities that are unlikely to become actual "major" sources in the near future. FMC would be classified as a “major” source based on potential emissions; however, since their actual emissions are less than 50% of the “major“ source thresholds, they are considered a Synthetic Minor Source.

4.3.4 Emission Sources

The air emissions inventory identified permitted emission sources at Fort McClellan. Table 4.7 lists these sources.

Table 4.7 Air Emission Sources with Permits at Fort McClellan			
Source Description	**Number of Units**	**Building Number**	**Permit Number**
Boiler (Gas-Oil Fired)	3 2 4	1076 2278 3176	301-0017-Z001 301-0017-Z002 301-0017-Z008
Propane Storage Tank	5	3217	301-0017-Z005
Incinerator	1	CDTF	301-0017-Z007

Fuel Oil Storage Tank	2 2 1 1	1076 1076 3176 3176	301-0017-X009 301-0017-X010 301-0017-X011 301-0017-X012
Gasoline Dispensing	4 4	265 2109	301-0017-Z013 301-0017-Z014
Bulk Storage Plant	4	263	301-0017-Z015
Source: Air Pollution Emission Statement, Reisz Engineering, January, 1995			

4.3.5 Notices Of Violation

At the submittal time of the 1995 Air Pollution Emissions Statement, Fort McClellan was operating in compliance with Federal and State Regulations and had no Notices of Violation (NOVs) or other outstanding non-compliance air issues. Table 4.7 lists air pollution permits issued by ADEM to Fort McClellan as of June 1994.

4.3.6 Conformity Determination

Under the authority of the CAA and resultant regulations, the USEPA has divided the country into geographical regions known as Air Quality Control Regions (AQCRs) to evaluate compliance with the NAAQS. There are primary NAAQS for protection of public health and there are secondary NAAQS for the protection of public welfare. Fort McClellan is under the jurisdiction of the USEPA Region IV and is located within Calhoun County in the East Alabama Intrastate AQCR. The East Alabama Intrastate AQCR is classified as attainment for all criteria pollutants.

There are two independent legal requirements which are used to determine air quality impacts. The first governing requirement is the National Environmental Policy Act (NEPA) and the second is the General Conformity Provision per the CAA, Section 176. Fulfillment of one requirement does not fulfill the other requirement, nor does the exemption of one automatically exempt the other. NEPA requires consideration of the direct and indirect effects of an action on the environment through a prescribed documented process. Completion of this EIS fulfills the NEPA air quality analysis requirements.

Federal Regulations (40 CFR, Part 51, Subpart W) establish General Conformity requirements for Federal facilities to ensure that activities do not adversely affect the State Implementation Plan goals. Conformity is aimed at preventing a Federal action from contributing or causing a violation of the NAAQS, from increasing the frequency of an existing violation, or delaying the timely attainment of a standard. At one time, USEPA considered implementing conformity requirements for attainment areas, however; the National Highway System Designation Act of 1995, Section 305 (Public Law 104-59) modified the CAA, Section 176 preventing the applicability of General Conformity to attainment areas. Since Fort McClellan is located in an attainment area for all criteria pollutants, the General Conformity Rule does not apply.

4.4 NOISE

Environmental noise at FMC is largely produced as a result of training activities involving tanks, helicopters, artillery, mortars, machine guns, small arms, grenades, and other explosives. The heavy artillery ranges are located on the more isolated, adjacent Pelham Range, while small arms ranges are located on both Pelham Range and FMC. Units using these ranges include the Chemical School, Military Police School, Training Center Command, 722nd Ordnance Disposal Company, Alabama Army National Guard, U.S. Army Reserves, and the U.S. Navy.

The Installation Compatible Use Zone (ICUZ) program was developed as a mechanism to protect military installation missions through identification and mitigation of noise impacts on installations and surrounding communities. The program relies on noise contour maps developed through the use of computer models with confirmatory noise monitoring to identify areas where incompatible uses could occur. Cooperation

between the military installation and local authorities effectively restricts development within such areas, through the zoning and permitting process, to uses that would be compatible with expected noise levels. Figure 4-4 illustrates the noise contour lines for FMC.

Noise Zones are classified into three levels for different types of land use:

Zone I is an area where the day-night sound level (DNL) is less than 65 decibels, A-weighted (dBA). This classification indicates that this area has minimal to moderate noise exposure. Generally less than 15 percent of the population would be highly annoyed by Zone 1 noise disturbances. Areas classified as Zone 1 are acceptable for noise-sensitive land uses including residential, medical, and educational facilities. Most of FMC is classified as Zone 1, being within 0-55 dBA.

Zone II is an area where the DNL is between 65 and 75 dBA. This classification indicates that this area has significant noise exposure. On the average, 15 to 39 percent of the population is highly annoyed by Zone II noise disturbances. Areas classified as Zone II are normally unacceptable for noise-sensitive land uses. Only 2 percent of FMC is classified as Zone II, primarily over the range impact areas.

Zone III is an area where the DNL is greater than 75 dBA. This classification indicates that this area has severe noise exposure and is unacceptable for noise-sensitive activities. Greater than 39 percent of the population would be highly annoyed by Zone III noise disturbances (ESE, 1996b). Zone III noise levels were not identified for FMC.

The Public Affairs Office (PAO) is designated as the central point of contact for handling noise complaints. Incoming complaints to FMC are transferred to the community relations department of the PAO. Community relations office personnel log the name, telephone number, and reason for complaint from the person calling. The Chief of Community Relations investigates the report of a noise disturbance and calls the complainant back with an explanation. The PAO office keeps a record of the number of complaints received per quarter. Table 4.8 presents the noise complaint data for the period July 1995 through the last quarter of Fiscal Year 1996 (Baker, 1996).

Table 4.8 Noise Complaint Data

Time Frame	July - September 1995	October - December 1995	January - March 1996	April - June 1996	July - September 1996*
Complaints	7	3	4	8	9

Note: * as of August 7, 1996

Source: FWEC, 1996 b

Figure 4-4 Noise Contours
11 x 17 (B & W)

4.5 WATER RESOURCES

4.5.1 Physiography and Surface Drainage

All but the eastern-most portion of FMC lies within the Valley and Ridge physiographic province of the Appalachian Highlands. The portion of FMC west of Choccolocco Creek lies within the Piedmont province. 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 installation and 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 installation boundary. The northern extension decreases in elevation in the vicinity of Reilly Army Airfield. The central portion of FMC is characterized by flat to gently sloping land (SAIC, 1995a).

The Choccolocco Mountains, located in the eastern portion of FMC, form a major surface water divide. Choccolocco Creek and its tributaries drain this portion of FMC and flow southward to the Coosa River (SAIC, 1993). FMC west of the drainage divide is drained by three creek systems, Cane, Choccolocco, and Tallasseehatchee creeks. Major watersheds, hydrography and flood prone areas are shown in Figure 4-5.

4.5.2 Surface Water

The Cane Creek watershed is among six major watersheds occurring within Calhoun County. Cane Creek, with its tributaries (Cave, Remount, South Branch, and Ingram Creeks), originates on FMC. Cane Creek flows across the length of FMC and drains the majority of the installation (approximately 20 square miles). 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 portion. The north-central portion of FMC is drained by Cave Creek, which leaves FMC on the northwestern boundary (SAIC, 1993). A small portion of the area along the northern installation boundary and north of the Cave Creek watershed, drains into the Tallasseehatchee Creek watershed (including its southern tributaries, Little Tallasseehatchee, Weaver's and Dothard Creeks). Dothard Creek has headwaters originating both on and off the installation and drains the area around Reilly Lake. These creek systems originate on the western side of the Choccolocco Mountains and flow west through FMC. They are fed by springs originating from underlying limestone strata.

Choccolocco Creek occurs to the east of the Choccolocco Mountains, passing along the eastern and southern portions of FMC. The Choccolocco Creek drainage includes three small tributaries originating near the southern boundary (Faison, Davis-Silver, and Royal-Davis Creeks).

Surface water features other than streams and creeks within FMC include Lake Yahoo (13.5 acres), Reilly Lake (8.5 acres), Cappington Ridge (0.3 acres), and Duck Pond (0.5 acre). Surface drainage is collected in small, independent networks that drain areas varying from 20 to 60 acres (SAIC, 1993).

Freshwater springs occur throughout Calhoun County, often appearing along the trace of thrust faults (Moser and DeJarnette, 1992). On FMC, the springs appear as seeps and include the Marcheta Orchid Seep, Bains Gap Seep, Cave Creek Seep, and Marcheta Hill Crow Poison Seep. Unmapped springs and seeps potentially occur over much of the FMC area. Karst features, including developed caves and sinkholes, have been identified in the area of FMC (USACE, 1992). Weaver Cave interrupts the drainage of Cave Creek from FMC prior to its reemergence approximately 1,300 feet downstream (SAIC, 1995a).

Figure 4-5 Major Watersheds and Floodplains, Fort McClellan
11 x 17 (B & W)

4.5.3 Surface Water Quality

The State has classified streams in this area as suitable for fish and wildlife use. Water quality surveys over the past 20 years have shown good water quality at most locations surveyed.

A survey conducted by the U.S. Army Environmental Hygiene Agency (USAEHA) and published in 1976 found the streams of FMC to be of good chemical quality and in good biological condition. In this study, averaged profiles at FMC sampling stations had average water temperatures of 17.8°C, dissolved oxygen levels at 9.3 ppm and average pH values of 7.5 (USAEHA, 1976).

Environmental Science and Engineering (ESE) conducted a water quality study in 1980, in conjunction with another study at FMC. Surface water quality was investigated at four sites. Data indicated that the water had no unusual concentrations of organic or inorganic constituents. Dissolved oxygen was at or near saturation (range 7.8 to 12.1 mg/l), and specific conductance was very low for all samples (range 18 to 21 µmhos/cm). Zinc and hydrocarbon concentrations were also low (range of <0.01 to 0.02 mg/l and 0.27 to 1.0 mg/l, respectively) (Ogden, 1992). Two sampling sites were located on Cane Creek, which drains FMC, including the golf course, the wastewater treatment plant, and urbanized areas surrounding Anniston, Jacksonville, and Pelham Range. The creek was found to be highly mineralized and the specific conductivity was elevated (range of 215 to 270 µmhos/cm).

Surface water quality data was collected concomitant with the recent biological surveys (Weninegar, 1993). Parameters examined included ammonia, carbon dioxide, chloride, dissolved oxygen, hardness, nitrites, pH, temperature, and turbidity. Concentrations tended to be highest in the fall at the stations closest to the mouth and were higher in the winter at the headwater stations. Ammonia concentrations ranged from 0.0 to 0.1 mg/l. Carbon dioxide levels varied from a low of 5 mg/l to a high of 20 mg/l. Chloride concentrations varied from lows of 15 mg/l at several stations to a high of 30 mg/l at an effluent dumpsite several meters below the Highway 21 bridge. Dissolved oxygen values found were from a low of 6 mg/l to highs of 11.0 mg/l at the two stations closest to the headwaters. Nitrite values were low and ranged from 0.0 mg/l at several locations to a high of 1.2 mg/l. Values for pH were usually alkaline (7.4 to 8.2 pH units) at all stations except the one closest to the headwaters where the waters were slightly acidic (6.3 to 6.5 pH units). Temperatures ranged from 11.0° to 21.1°C. Only one station, that was closest to the mouth, had any measurable turbidity with a concentration of 1.0 NTU (Weninegar, 1993).

Additional surface water quality data was collected as part of a multifaceted study done to characterize the geochemical signature of mineralized and highly altered rocks at FMC (Tucker et. al., 1995). A summary of the results of this study is provided in Table 4.9. Results show the streams sampled to generally be of good water quality. Several of the springs sampled had slightly alkaline, mineralized water. One spring, on Range 21 had slightly elevated lead and copper values averaging about 16 and 6.1 parts per billion (ppb), respectively (USGS, 1995). The study also stated that high levels of heavy metals could be a natural result of mineralization of the rocks and soils of the area. The study concluded that since springs and seeps are particularly influenced by the chemical composition of associated rocks and soils, high lead values at some sites could be the result of these nonanthropogenic processes (USGS, 1995).

4.5.4 Floodplains

High flow periods on the waterways in and around FMC generally occur in spring (March through May). However flash flooding can occur throughout the year as a result of intense rainfall events associated with thunderstorms or cyclonic events. Areas within the 100-year floodplain have been determined for all major waterways on FMC. Floodprone areas on FMC include regions along Cane Creek, Remount Creek, Lenlock Branch, Cave Creek, Ingram Creek, and South Branch of Cane Creek (see Figure 4-5). These areas are designated on the 1985 Flood Insurance Rate Maps for Calhoun County as issued by the Federal Emergency Management Agency (FEMA, 1985).

Table 4.9 Summary of Inorganic Constituents from Stream and Spring Waters Collected from Fort McClellan

			Cond		Temp	PPM [1]									
Sample	**Place**	**UTM FN**	**M/S**	**pH**	**C**	**Ca**	**Na**	**K**	**Mg**	**Cl**	**SO_4**	**NO_3**	**Alk**	**Fe**	**SiO_2**
FMW 07	brook, Range 24A	1506 2752	18	7.3	18	1.4	0.87	1.9	0.6	1.1	3.1	<0.2	<10	0.07	11
FMW 08	spring, Range 21	1550 3083	14	6.7	19	1.3	0.83	1.5	0.4	0.98	1.6	<0.2	<10	0.08	13
FMW 09	brook, Bain Gap	1774 3126	17	6.6	19	1.5	0.72	1.6	0.6	0.99	2.8	<0.2	<10	<0.1	11
FMW 10	brook, Truitt Hill	1690 3476	15	7	18	1.1	0.6	0.77	0.7	1	3.4	<0.2	<10	<0.1	6
FMW 11	stream, north FM	1532 3475	20	7.4	18	2.2	0.66	0.85	1.1	1.1	2.6	<0.2	<10	0.03	7
dup ICP	stream, north FM	1532 3475	n/a[2]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FMW 12D	duplicate of W11	1532 3475	20	7.4	18	2.2	0.65	0.85	1.1	1.1	2.6	<0.2	<10	0.02	7
FMW 13	brook, French Hill	1647 3476	15	6.3	18	1.3	0.63	0.3	0.6	1.1	1.8	<0.2	<10	0.05	6
FMW 14	stream, Res Ridge	1360 3335	13	6.7	20	1.4	0.62	0.55	0.7	1.1	2.3	<0.2	<10	0.03	7
FMW 15	brook, Twin Peaks	1160 2660	15	6.7	18	1.4	0.64	1.1	0.7	1	2.4	<0.2	<10	0.02	8

		PPB													
Sample	**Place**	Cu	Pb	Zn	Mo	Mn	Co	Ni	Y	Ba	Rb	Sr	Sb	La	Ce	Al
FMW 07	brook, Range 24A	<0.7	<0.5	3	<0.2	7.6	<0.1	0.4	<0.1	19	2	6	<0.1	0.2	0.2	<.1
FMW 08	spring, Range 21	6.1	16	4	<0.2	5.5	0.2	<0.3	<0.1	13	2.3	4.6	0.5	0.1	0.2	<.1
FMW 09	brook, Bain Gap	<0.6	<0.5	<3	<0.2	2.3	<0.1	<0.3	0.1	22	2.1	8.9	<0.1	0.2	0.2	<.1
FMW 10	brook, Truitt Hill	<0.6	<0.5	3	<0.2	10	<0.1	0.3	0.2	24	1.2	7.6	<0.1	<0.1	0.2	<.1
FMW 11	stream, north FM	<0.6	<0.5	<3	<0.2	29	0.3	0.5	0.2	28	1.7	6.7	<0.1	0.2	0.3	<.1
dup ICP	stream, north FM	<0.6	<0.5	<3	<0.2	26	0.2	1.1	0.2	27	1.6	6.6	<0.1	0.2	0.2	n/a[2]
FMW 12D	duplicate of W11	<0.6	<0.5	<3	<0.2	27	0.2	0.5	0.2	29	1.4	5.9	<0.1	0.1	0.2	<.1
FMW 13	brook, French Hill	<0.6	<0.5	3	<0.2	54	0.1	2.4	0.7	20	0.6	6	<0.1	0.2	0.6	<.1
FMW 14	stream, Res Ridge	2.4	2	4	<0.2	15	0.2	0.4	0.3	20	0.9	8.9	0.3	0.2	0.4	<.1
FMW	brook, Twin	<0.6	<0.	<3	<0.	10	0.1	<0.	0.1	19	1.7	6.3	0.2	0.1	0.2	<.1

15	Peaks		5		2			3								

Note: 1 The following elements were not detected at the 0.1 ppb level unless noted, number in parentheses is the detected limit or the sample where the element was detected and the value: Ag, As (0.6), Au, Be (1), Bi (1), Cd (0.9), Cs (W2 and W6 at 0.2), Dy, Er, Eu, Ga (0.3), Ge (0.4), Hf, Ho, Li (2), Nb (0.2 and W2 at 0.6), Pr (W2 at 0.2), Re, Sm, Sn (1), Ta, Tb, Te (2), Ti (1), Th (0.8), TI (0.6), Tm, U (0.2), V (0.2, W1 and W3 at 0.2, W2 and W4 at 0.3), W, Yb, Zr, (W2 at 0.3).

2 information not available

Source: FWEC, 1996 & USGS, 1995.

The 100-year floodplain for stream drainage on FMC includes the following features and facilities: formerly used Landfills 2 and 3, Landfill 4, Alabama Military Academy facilities, portions of the golf course area, training aids and temporary Military Police academic facilities, transportation motor pool yard, industrial storage areas along Baltzell Gate Road, Directorate of Logistics warehouses, and Directorate of Engineering facilities (Weston, 1990). It also includes facilities along Seventh Avenue, 21st Street, 22nd Street and the main training ranges within the Ingram Creek drainage area (SAIC, 1993).

Table 4.10 lists the building numbers for those structures that are within or immediately adjacent to the 100-year floodplain. These data were derived by using the Federal Emergency Management Agency (FEMA), Flood Insurance Rate Map, Calhoun County, February 1993 to compare the base elevations for buildings in or immediately adjacent to the floodplain boundary. Those structures or appurtenances that were partially or entirely at or below the flood elevation were included.

Table 4.10 Buildings or Structures In or Adjacent to Flood Prone Areas, Fort McClellan

T-204	256	T-931	1223	T-1321	T-1997
205	T-257	T-933	1234	T-1322	T-2116
206	T-258	T-948	1271	T-1323	2247
207	T-260	T-961	1298	T-1324	2248
208	T-261	T-964	T-1302	T-1358	3139
209	T-262	1095	T-1303	T-1359	3146
211	T-263	1096	T-1307	T-1360	3147
212	264	1097	T-1308	T-1361	3148
T-213	T-265	1212	T-1309	T-1362	3149
214	266	1213	T-1310	1370	3295
229	339	1214	T-1311	T-1379	3301
230	502	1216	T-1317	T-1396	5700
242	504	1217	T-1318	1399	5714
251	546	1218	T-1319	T-1898	T-5715
252	T-928	1220	T-1320	T-1899	

*Source: FWEC, 1996*b

4.5.5 Stormwater

The FMC stormwater management system consists of storm water inlets, pipes, channels, waterways, and streams. Cane Creek is the primary stream draining most of the western portion of the installation. In addition, 253,954 LF of storm sewer conveys stormwater runoff collected from inlets throughout FMC (FMRRA,1996).

A comprehensive study of FMC's storm drainage system entitled, *Design Analysis for Storm Drainage*, was done in 1977 (HBA, 1990). The study cited several improvements that could be made to the system.

FMC has a NPDES permit (No. AL0055999) for stormwater runoff at 14 industrial sites and one process water discharge site. The outfalls monitored under the permit are listed in Table 4.11. FMC prepared a Stormwater Pollution Prevention Plan (SWPPP) in July 1997 that covers the permitted sites. Detailed information on each outfall, outfall locations, outfall sampling results and generic Best Management Practices (BMPs) are included in the information presented in the SWPPP.

Table 4.11 Permitted Stormwater Outfalls
DSN 001 Fog Oil Storage Area on Range 24A, FMC
DSN 002 Fog Oil Storage Area on Training Area 4A, Pelham Range
DSN 003 Vehicle Wash Rack and Vehicle Maintenance Facility at Pelham Range, Facility # 8422 and 8424
DSN 004 Motor Pool, 11th Chemical Company, Facility # 3298 and 3299
DSN 009-010 Motor Pool, Subpool, Facility # 3138
DSN 011 Motor Pool, 209th Military Police, Facility T-1997
DSN 012-017 Active Landfill # 4
DSN 018-019 Inactive Landfill 1
DSN 020 Inactive Landfill 2
DSN 021-024 Inactive Landfill 3
DSN 025-027 DRMO
DSN 028 OB/OD Site Pelham Range
DSN 029-030 Aboveground Storage Tank Farm, Facility # 296 (Tanks Removed. Permit modification to be requested.)
DSN 031-032 DOL Outdoor Storage Yard, near facility # 241
DSN 033 Smoke Line Pad, Range 24A
Note: * The landfill remains open as an Industrial Landfill for the receipt of construction and demolition debris. The sanitary portion was closed in 1994.
Source: USGS, 1995

4.5.6 Groundwater

Precipitation in the form of rainfall and subsequent infiltration is the primary source of groundwater recharge in the area of FMC. In unconsolidated materials, the groundwater occurs within the intergranular pores. Most of the consolidated units in the FMC area do not contain open pore spaces. In these units groundwater storage and movement occurs through discontinuities in the rock. The discontinuities may result from fracturing (i.e. joints and fault zones) or as flow along bedding planes. In units that contain appreciable quantities of limestone or dolomite, these openings can become enlarged through the material dissolving into the groundwater. The dissolution process, known as karst, is very slow, but over long periods of time, the dissolution can result in openings that allow substantial storage of groundwater and rapid groundwater flow rates. Shallow groundwater on FMC occurs principally in the residuum developed from weathering of underlying rock units in alluvial sediments along the larger creeks and rivers. Aquifers in the vicinity of FMC are developed in residuum derived from bedrock decomposition, in fractured bedrock along fault zones, and in karst flow systems. The flow of groundwater is generally toward major surface water features. However, the impacts of differential weathering, variable fracturing, and the potential for conduit flow development may lead to local variation in the groundwater flow pattern. Because of the heterogeneity of the hydrogeologic parameters, the extension of groundwater elevation contours over distance on the size scale of FMC may provide only a general indication of groundwater flow direction in the absence of closely spaced control points.

Groundwater intersection with the ground surface has resulted in the occurrence of numerous springs in the area which act as important sources of discharge and water supply in the region. Continuous discharge from many springs results in the formation of standing surface water bodies that do not exhibit significant low-flow water level reduction (SAIC, 1995a).

Groundwater generally moves southward along the eastern side of the Choccolocco Mountains and then southwesterly at the southern end of the mountains. Under the cantonment area, movement is in a west-northwesterly direction toward the Coosa River. Groundwater flows across FMC occur in a northwesterly direction under an average hydraulic gradient of 0.02 foot/foot based on average groundwater elevations from various wells within the area (SAIC, 1995a). Using average measured and estimated aquifer parameters for FMC, groundwater flow velocity is calculated to be 0.026 foot/day (SAIC, 1995a). Variability in groundwater flow direction is likely to occur in localized areas of FMC dependent on local topography, proximity to surface water bodies, and subsurface geology and structure (SAIC,1995a).

Few quantitative hydrogeological assessments of regional groundwater flow patterns in the area surrounding FMC have been conducted. Scott et. al., (1987) estimated the recharge area for Coldwater Spring based on groundwater elevation measurements from 140 wells and springs. Coldwater Spring receives groundwater from fractured and weathered zones in the Chilhowee group, as well as from solution cavities and channels in the Shady Dolomite; the Conasauga Formation which runs 2 1/2 miles (4 kilometers) below Cane Creek; and the Knox Group. Based on the limited data, Scott et al. (1987) inferred a recharge area of approximately 90 square miles (234 square kilometers) for Coldwater Spring generally extending from the spring northeastward to Jacksonville along the trace of the Jacksonville Fault. This and other faults in eastern Calhoun County are generally regarded to significantly impact groundwater storage and movement (Warman and Causey 1962, Scott et. al., 1987). Groundwater elevation measurements collected from April 1994 through June 1995 from wells near Remedial Investigation sites show that the measured depth to groundwater ranged from 0.0 to 129.87 feet below land surface (BLS) with the average depth being 24.2 feet BLS.

Groundwater quality in the area surrounding FMC has been investigated primarily through remediation activities at the installation. However, one study (Moser and DeJarnette, 1992) was conducted by the Geological Survey of Alabama to characterize groundwater quality in the county as a whole. Samples were collected in 1987 and 1988 from springs and from private wells ranging in depth from 65 to 263 feet BLS. These analyses indicate that the groundwater is a predominantly calcium carbonate type, characteristic of carbonate regions. The data demonstrate that groundwater quality in the area is generally good with some areas of alkaline and mineralized water. Lead was found in some samples at

concentrations as high as 15 ppb. Iron was also found in slightly elevated amounts (11,000 ppb) in some samples (Moser and DeJarnette, 1992). The only areas with known man-induced groundwater contamination is in the area of the former installation landfills.

The U.S. Geological Survey assisted in a multifaceted study of FMC and Pelham Range in 1993 and 1994 to characterize the geochemical signature of mineralized and highly altered rocks and the concomitant contribution of heavy metals in soils and groundwater. As part of this study, inorganic constituents analyses on stream and groundwater data were conducted (USGS., 1995). This analysis included groundwater data collected at monitoring wells surrounding Landfill No. 4 periodically from March 1994 to March 1995. As with the results of the 1992 groundwater sampling done by Moser and DeJarnette, this study also found elevated levels of iron and lead. Iron concentrations were elevated at most stations samples while lead concentrations were consistently elevated at monitoring well number 2 (USGS, 1995). Slightly elevated chloride levels were found at monitoring well number 4 in March, June and September 1994. Samples for other sampling periods at this well and at all other wells for all sampling periods were below the maximum contaminant level (MCL) (USGS, 1995). The study suggests that many elevated levels of heavy metals could be the natural results of mineralization and weathering of surrounding geological formations. The authors noted that although there is suspected anthropogenic contributions to the overall metal load by far the greatest contributor is the natural environment. This study and the work done by Moser and DeJarnette (1992) suggest that analysis of environmental contamination in this area should consider the occurrence of naturally elevated minerals and metals in background data.

In 1996, Guardian Systems performed a statistical analysis of the monitoring well groundwater data used by Tucker et al. In addition, the data set also included another year of monitoring data through March 1996. This analysis concluded that average concentrations of iron and manganese levels from groundwater at all wells exceeded the ADEM MCL. Lead was found to exceed the ADEM MCL at two wells. In addition to exceeding MCLs for those parameters, monitoring well 4 also had levels of chlorides and trichloroethylene that exceeded the MCL (Guardian Systems, 1996).

4.6 GEOLOGY

4.6.1 Geologic Structure

FMC lies almost entirely in the Valley and Ridge physiographic province of the Appalachian Highlands, where southeastward dipping thrust faults with associated minor folding are the predominant structural features. Figure 4-6 presents the geologic units underlying FMC. Consolidated rocks ranging in age from Precambrian to Pennsylvanian have sharply folded into northeastward-trending synclines and anticlines complicated by thrust faults that have a general northeastward-trending strike and southeasterly dip. These thrust faults are the predominant structural features of the Calhoun County area. The extreme eastern portion of FMC lies within the Piedmont physiographic province (SAIC, 1995a).

The Jacksonville Fault is a major thrust fault within the fold and thrust belt of the Appalachian Highlands in Alabama. This fault is the most significant structural geological feature due to its role in determining the stratigraphic relationships in the area and for its contribution to regional water supplies (SAIC, 1995a). Cambrian and Ordovician rocks associated with the fault and adjacent structures include the Chilhowee Group; Shady Dolomite; Rome Formation; Conasauga Formation; Knox Group, undifferentiated; Newala and Little Oak Limestones, undifferentiated; and Athens Shale.

Changes in the structural style of the fault along the strike suggest a complex history of deformation. Stratigraphic separation on the fault decreases toward Bynum, Alabama, where the fault dies out on the foreland side of an apparently imbricated, southwestern plunging anticlinal fold making Coldwater Mountain and the southwestern end of Choccolocco Mountain. Hydrologic conditions in areas adjacent to the fault are controlled by both stratigraphy and structure. The permeability of rock units in the area is the result of secondary openings. The rock types with the greatest permeability are the highly fractured quartzite beds of the Weisner Formation and the fractured dolomite beds within the solution cavities of the Knox Group. All the other rock units have very low primary and secondary porosity and permeability. The greatest porosity and permeability occurs in a wide zone of fracturing where quartzite and dolomite are

juxtaposed along the Jacksonville Fault. The wide fracture zone is most prominent southwest of FMC on the northwestern sides of the Choccolocco and Coldwater Mountains.

The Weisner Formation, characteristic of FMC, occurs to 2,500-foot (750-meter) depths and consists of buff shale, siltstone, sandstone, quartzite, and conglomerate. Outcrops form hills or mountains of great relief. Quartzite and conglomerate are most conspicuous where they form crests or ledges along the southeastern side of Choccolocco Mountain. This mountain runs north to south, forming the eastern boundary of FMC. Locally, the Weisner Formation contains deposits of limonite, manganese, bauxite, and hematite.

4.6.2 Soils

Three major soil associations are found in the disposal area at FMC. These soil associations are Stony Rough Land, the Anniston-Allen-Decatur-Cumberland Association, and the Rarden-Montevallo-Lehew group. These soil associations are illustrated in Figure 4-7. None of the soils present in the disposal area would constitute prime farmland.

Stony Rough Land is comprised of shallow, steep, and stony soils underlain by sandstone, limestone, and Talladega slate. Some 80 percent of the disposal area consists of this group. Characterized by stony or rough land, high water runoff, and slopes over 25 percent, this soil association does not lend itself to construction without proper erosion management practices. These soils are generally unsuited to cultivation. Typical uses include woodlands, wildlife management and grazing.

The Anniston-Allen-Decatur-Cumberland association is found in the northern and west-central portions of the cantonment area. This series is composed of deep, well-drained, level to moderately steep soils in valleys underlain by limestone and shale. The soils range from gravelly loam to silty clay loam. These soils are suitable for cultivation, but depending upon slope, may need careful management to prevent erosion. Cumberland and Decatur soils are dark reddish-brown gravelly loam developed from limestone saprolite source (SAIC, 1995a). Steeper slopes must be kept permanently vegetated, since erosion can occur without careful management.

The Rarden-Montevallo-Lehew group is composed of moderately deep or shallow soils on ridgetops and steep slopes and in local alluvium on foot slopes or in draws. This soil group is found in the northwestern and western portions of the cantonment area. Soils developed from the residuum of shale and fine-grained, micaceous sandstone. These soils are typically reddish-brown to dark gray brown to yellow brown silt loam, clay, or silty clay (SAIC, 1995a). The soils are not well suited for cultivation. The soils are typically only moderately to poorly productive.

4.6.3 Topography

The cantonment area is surrounded on its southern and eastern sides by a series of mountainous ridges known as Choccolocco Mountains. Lateral ridges extend from the main range in a westerly direction, rising from 700 to 2,063 feet above sea level. Much of this area has slopes of over 25 percent (Figure 4-8). The remainder of FMC is more gently rolling. Early geologic survey documents reveal the existence of two caves in the cantonment area. However, these suspected caves have not been reported by installation personnel in over 80 years of operating the cantonment area. The Choccolocco Corridor is bordered by Choccolocco Mountain on the west and the Talladega Mountains on the east. The valley between these two mountain ranges consists of flat to gently rolling lands. The disposal area is typified by moderately steep to steep slopes with little flat land at either the ridge top or valley floor.

4.6.4 Mining Activity

According to the Bureau of Land Management, Non-Energy Mineral Department, no modern mining activities occur at FMC. By law, the Bureau of Land Management is prohibited from allowing mining activities on Department of Defense (DOD) lands. Additionally, the Bureau of Land Management, Oil and

Gas Section, reports no active or inactive permits or leases for oil and gas exploration and extraction at FMC.

However, historical mining did occur at FMC and in the surrounding area. In the FMC Cultural Resources Overview by New South Associates, several references to mining at FMC and in the surrounding area are detailed. During the Civil War, the caves along Cane Creek were mined for saltpeter and Blue Mountain Cave was mined by the Confederate Army. After the Civil War, iron manufacturing companies relocated to this area lured by the rich deposits of hematite ore and plentiful forests. The area was mined to support iron manufacturing processes.

Figure 4-6 Geology, Fort McClellan
11 x 17 (B & W)

Figure 4-7 Soil Associations at Fort McClellan
11 x 17 (B & W)

Figure 4-8 Topography/Slope, Fort McClellan
11 x 17 (B & W)

4.7 INFRASTRUCTURE

4.7.1 Potable Water Supply

The potable water supply system provides supply sources, storage capacity, and a distribution network. The primary water source is the Anniston Water Works and Sewer Board. A 1.5 million gallon aboveground steel tanks provides the current storage capacity.

FMC obtains its water from the City of Anniston Water Works and Sewer Board. The source waters for this system is primarily from Coldwater Spring (estimated flow of 24-36 million gallons per day (MGD)), located approximately 7 miles southwest of Anniston, and Hillabee Creek Reservoir, located about 3 miles southeast of Anniston supplies a portion of the water. Both sources undergo chlorination and fluoridation treatment prior to distribution; water from Hillabee Creek must also undergo filtration. The Calhoun County Water and Fire Protection Authority Office, which gets its source water from Seven Springs and Read's Mill, supplies water to one faucet in area B44. This area is located on the Choccolocco Corridor land that is leased from the state and will return to state control upon closure of FMC.

The potable water is supplied to FMC through double mains from the city's distribution system to government-owned booster pump stations at Summerall and Baltzell Gates; this is the installation's primary drinking water system. Under the present operating conditions, the post's water demands are solely met by the Summerall Gate pumping station; the Baltzell Gate pumping station is used only for peak demand days and in case of fire. Summerall Gate pumps and Baltzell Gate pumps were replaced within the last 15 years with 1,500 gallon per minute (GPM) pumps. Water is re-chlorinated at the pumping stations before entering the FMC distribution system. Water distribution occurs through a system of approximately 513,000 LF of pipeline ranging in size from 4-inches to 12-inches in diameter.

There are two water storage tanks on FMC. One is an underground concrete storage reservoir with a 1 million gallon capacity, and the other is an aboveground steel tank with a 1.5 million gallon capacity. Both storage tanks were originally permitted water supplies by the ADEM. Due to degradation of its liner, the underground storage reservoir is no longer in service. The aboveground steel tank was refurbished in 1990 and remains in service.

There is a well located at Bivouac 44 that provides potable water. The well at Bivouac 44 was permitted by ADEM for 1987 through 1997. In July 1988 FMC notified ADEM that county water was provided to Bivouac 44. As a result, ADEM discontinued the permit requirements for this site, and the well is no longer used. A well at Reilly Lake provides water to flush toilets, but the water is not potable.

FMC is currently in compliance with Safe Drinking Water Standards. FMC's public water supply system was inspected by ADEM in July 1996. Water samples are taken at regular intervals to detect possible contamination. Lead content in drinking water was tested by the U.S. Army Environmental Hygiene Agency-South (USAEHA-South) during December 1991 and has been monitored continuously in accordance with ADEM requirements since that time. All results have been negative, and the drinking water has been found to meet required standards.

In 1994, FMC's population of approximately 8,000 had an average daily demand for water of 1.17 MGD. By contract, FMC's water limit was 3.5 MGD in 1994. In August 1993 the maximum water usage was 1.51 MGD. There is no physical limitation which would restrict delivery of substantially greater quantities of water by the Anniston system.

4.7.2 Wastewater Collection And Treatment

The wastewater management system includes an extensive network of gravity collection sewers, force mains, three pumping stations, and a recently improved wastewater treatment plant. The collection network consists of approximately 338,000 LF of sanitary sewer pipe and 300 LF of industrial waste pipe (FMRRA,1996). An estimated 75-percent of the network has been sliplined to reduce infiltration and inflow.

The wastewater collection system on FMC discharges to trunk sewers in four major zones which converge near the wastewater treatment plant (Figure 4-9). Zone 1 serves the Chemical School-National Guard area with 15-inch and 18-inch diameter gravity sewers. Zone 2 serves the central portion of FMC with 18-inch and 24-inch diameter gravity sewers. Zone 3 serves the eastern-most family housing area with a 12-inch diameter gravity sewer. Zone 4 serves the remaining family housing area using a 10-inch diameter gravity sewer and Pumping Station No. 3 with parallel 6-inch and 8-inch diameter force mains. Wastewater is transported across Jacksonville Highway to the treatment plant by a 30-inch diameter gravity sewer.

The FMC Wastewater Treatment Plant (WWTP) is located west of FMC along Anniston-Jacksonville Highway 21 and discharges into Cane Creek. The plant serves all of FMC as well as residents bordering the post boundary in the communities of Pelham Heights and Lenlock. Following an upgrade to achieve tertiary treatment standards a revised NPDES permit (No. AL0024520) for the plant's operation was issued in September 1994. The WWTP is operated by Operations Technologies, Inc. under contract. The average daily throughput of the WWTP is 1.5 MGD, but the system can accept a maximum average flow of 2.2 MGD. Of the 1.5 MGD average daily influent, 1.3 MGD is from FMC. The remaining 0.2 MGD is from the communities of Pelham Heights and Lenlock. The peak flow for storm events is established at 8.6 MGD; any flow in excess of 8.6 MGD must be reported to ADEM before the excess flow can bypass the treatment plant. Influent flows through a grit chamber, bar screen, and a Parshall flume prior to treatment in two primary clarifiers. After the primary clarifiers, the flow enters two mechanically aerated continuous flow aerobic reactors. Overflow from the digesters enters secondary clarifiers followed by carbon activated trickling filtration. Prior to discharge, the flow is aerated to increase the dissolved oxygen content and ultraviolet treatment is applied to reduce bacterial count. Sludge from the process is discharged to drying beds and removed to a sanitary landfill offpost after drying (Reisz, 1996).

4.7.3 Solid Waste Disposal

FMC formerly disposed of its sanitary solid waste in Landfill No. 4 located in the northwestern portion of the installation. This landfill has three disposal areas, one for sanitary waste, one for construction and demolition debris, and a special waste section for asbestos. However, because new RCRA Subtitle D requirements mandated that the sanitary landfill be lined, FMC closed the sanitary portion of the landfill on April 8, 1994. Presently, the installation's sanitary solid waste is disposed by a contractor off-post at a Subtitle D facility in Cropwell, Alabama.

The installation continues to dispose of construction and demolition debris in a 12.5-acre portion of Landfill No. 4. (Industrial Landfill). This landfill accepts wastes including construction/demolition waste and/or rubbish. Construction debris includes, but is not limited to masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products (ESE, 1998a). The industrial landfill is permitted by the ADEM to accept up to 30 tons per day.

A voluntary recycling program exists for FMC residents and personnel. Products such as paper, plastic, glass and aluminum are collected at designated areas throughout the installation. Scrap metal is also turned in through the recycling program. Building 338 houses the installation's recycling program.

Figure 4-9 Infrastructure - Wastewater Collection Zones
8 1/2 x 11 (B & W)

4.7.4 Landfills

There are three formerly used landfills (Landfill Nos. 1-3) at FMC and one landfill that has an active portion and a non-active portion (Landfill No. 4). The landfill locations are shown on Figure 4-10.

4.7.4.1 Landfill No. 1. Landfill No. 1 was the FMC Sanitary Landfill from 1945 to 1947. It is located between 16th Avenue and Avery Drive and covers approximately 11 wooded acres on the side of a hill. The parcel is adjacent to the floodplain of an intermittent creek that runs into Remount Creek. Samples collected during recent investigations of the site were analyzed for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs), explosive compounds, and metals. Naturally occurring lead and arsenic as well as trace concentrations of the pesticide DDE were detected in soils. A downstream sample collected from Remount Creek detected trace concentrations of VOCs (chloroform; 1,1,1-trichloroethane; and chlorobenzene) and an explosive compound (1,2 dinitrobenzene). Four monitoring wells were installed at the site. Groundwater samples detected trace metals (lead and arsenic) and isolated traces of VOCs, SVOCs, and explosive compounds. Science Applications International Corporation (SAIC) recommended that no further site investigation be conducted. FMC is currently considering all proposed courses of action (ESE, 1998a).

4.7.4.2 Landfill No. 2. Landfill No. 2 was the FMC landfill after the closure of Landfill No. 1. It was active from 1947 to an unknown date and occupies approximately 1.5 acres. The landfill is located on the southern tip of Cemetery Hill between 2nd Avenue and 10th Street, in the floodplain of the intermittent Cave Creek. Reportedly, this landfill was used to dispose of construction debris during demilitarization. Rusted drums, metal, small containers, and assorted building materials have been observed on the site. Groundwater samples analyzed for VOCs, SVOCs, PCBs, chemical warfare agent breakdown products, and explosives did not indicate pervasive groundwater contamination. Only naturally occurring trace metals were detected in surface water and sediment samples. SAIC recommended that no further site investigation was needed. FMC is currently considering all proposed courses of action (ESE, 1997a).

4.7.4.3 Landfill No. 3. Former Landfill No. 3 is located in the northwest corner of Main Post bounded by Anniston-Jacksonville Highway (Route 21) to the west, 3rd Avenue to the east, the installation's boundary to the north, and Cave Creek to the south. This 22-acre site was the sanitary landfill for the installation from 1946 to 1967. The landfill was constructed using trenches which extended northwest across the site from 3rd Avenue. Reportedly, empty pesticide containers, ammunition, and the burned ammunition pallets or crates were disposed here. Paint containers, fluorescent bulbs and ballasts, waste oil, and construction debris may also have been disposed at this location. There were no requirements to cap when it was closed in 1967, and settling is occurring, which could indicate that water is infiltrating through the topsoil (ESE, 1998a).

Currently, 19 monitoring wells have been installed at this site. Groundwater samples have been analyzed for VOCs, SVOCs, metals, pesticides/PCBs, chemical agent breakdown products, and explosives. The metals detected above USEPA drinking water maximum contaminant levels (MCLs) were aluminum, iron, lead, and manganese. The chlorinated compounds detected by the analysis in low concentrations include chlorobenzene, 1,1-dichloroethane, 1,2-dichloroethene, tetrachlorothene, trichloroethene, 1,1,2,2-tetrachloroethane, and pentachlorophenol. Pesticides detected in low concentrations include endosulfans I and II, alpha/delta-BHC, heptachlor, isodrin, 4,4'-DDD, 4,4'-DDE, and 4,4'-DDT. The compound related to explosives found in the groundwater was 1,3,5-trinitrobenzene. Other compounds detected included bis(2-ethylexyl)phthalate, benzo(a)anthracene, and chysene (ESE, 1998a). There appears to be no widespread environmental contamination from Former Landfill No. 3 that is affecting the site's surrounding surface waters and corresponding sediment beds (ESE, 1998a). Continued monitoring and any remediation of potential groundwater contamination is being addressed by the BRAC Cleanup Plan (BCP).

Remedial alternatives proposed for the Former Landfill No. 3 include: no action; deed restrictions and monitoring; media cap; and the excavation of the surface soil and extraction of groundwater for treatment (ESE, 1998a).

4.7.4.4 Landfill No. 4. Landfill No. 4, located at the northern end of FMC and to the east of Landfill No. 3 was opened in 1967 as the Post Sanitary Landfill. This landfill was unlined and used the trench and fill method for disposal. All of the post household garbage, construction and demolition debris, oil contaminated soil, and dead animals used in the Chemical School demonstrations were disposed of in the Post Sanitary Landfill. This landfill was closed in April 1994 because regulations now require all sanitary landfills to be lined.

FMC received a temporary permit in 1993, to dispose of industrial and construction debris at this location. A permit to operate a permanent Industrial Landfill was issued in October 1995 which allows disposal of waste on previously unused sections of the landfill property. The Industrial Landfill is located on a 12.5-acre section of Landfill No. 4. This landfill accepts industrial wastes including construction/demolition waste and/or rubbish. Construction debris includes, but is not limited to masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products. In addition, there is a designated area for asbestos disposal (ESE, 1998a). Petroleum contaminated soils are placed in a lined portion of the landfill for remediation by bioremediation.

Groundwater sampling is conducted on a semi-annual basis. The sampling parameters are iron, total organic carbon (TOC), arsenic, barium, cadmium, chromium, lead, mercury, manganese, sodium, nitrates, COD, and phenols. In addition, explosive gas levels are monitored annually. Prior to closure and capping of the sanitary landfill, groundwater samples routinely exceeded drinking water standards for metals (i.e., manganese, lead, iron, and chromium). Analyses show that toluene, chloride, and magnesium were above background levels. Groundwater sampling results since the capping have changed dramatically. Lead levels have decreased the most; however, they are still above the MCL for drinking water (ESE, 1998a).

4.7.5 Highways And Roadways

Highway 21 is a major north/south 4-lane divided arterial adjacent on the west of FMC, transitioning to 5-6 lanes south of its intersection with Highway 431. Four main gates, Summerall, Baltzell, Baker and Galloway, provide access to the cantonment area from Highway 21. Highway 431 is a major northwest/southeast 4-lane divided arterial which intersects Highway 21 just south of Summerall Gate, and is the major connector between Anniston, Gadsden, and Huntsville. Average daily traffic (ADT) counts for 1995 exceeded 40,000 on Highway 21 south of its intersection with Highway 431, exceeding the ADT on I-20 which is adjacent to the south of Anniston and Oxford. ADT for 1995 on Highway 431 exceeded 23,000 near its intersection with Highway 21 (ADOT, 1996). The current Levels of Service (LOS) for Highway 21 range between “E” and “F” from north of Summerall Gate south to approximately 15th Street in Anniston (ADOT, 1995).

FMC has 112 miles of unsurfaced roads, 99 miles of surfaced roads, and 49 bridges (Installation Summary, 1996). Streets within the cantonment area are paved and adequately maintained. The major street system serving the cantonment area is configured in an irregular radial pattern with the major elements consisting of Baltzell Gate Road, Summerall Gate Road, and Galloway Gate Road. ADTs approximated 7,600 on Summerall Gate Road and 9,000 on Baltzell Gate Road in 1992 (ADOT, 1996). ADT on the Galloway Gate Road approximated 6,800 based on estimates provided by FMC staff. ADT at Baker gate are limited to local traffic in and out of the housing area serviced by this gate. The total external baseline traffic at FMC is approximately 23,500 ADT which includes the traffic at the Summerall, Baltzell and Galloway Gate Roads. The total baseline traffic (internal and external) is approximately 29,375 ADT (see Table 5.3).

Figure 4-10 Infrastructure - Landfills
11 x 17 (B & W)

Connector streets link major activity areas. Major connector streets consist of 15th Street, 20th Street, 16th Avenue, 6th Avenue, 4th Avenue, 5th Avenue, Nielsen Street, 10th Avenue, 8th Avenue, and 21st Street. This configuration provides good access to and from the various activities within cantonment area. A number of hard surface roadways provide access to the outlying range and training areas outside of the cantonment area. These roadways include Rock Hollow Road, Bains Gap Road, and 10th Street. Other unnamed gravel roads provide access to range and training areas removed from the cantonment area. Figure 4-11 illustrates the pattern of arterials.

Transportation problems in the cantonment area are primarily related to congestion. Peak hour vehicle stacking is quite common at Baltzell Gate and Summerall Gate, the two most heavily used gates. This is due to the reduced carrying capacity of the two-lane Baltzell Gate and Summerall Gate Roads. Traffic congestion is also evident around the community center at the intersection of Summerall Gate Road and 10th Avenue.

4.7.6 Railways

FMC's rail network consists of 17 track sections originally totaling 8.3 miles and generally running east and west through the cantonment area. The original rail network consisted of nine spurs and seven sidings off the Southern Railroad lead track that connects to the branch line between Anniston and Spring Garden, Alabama. A large amount of the trackage has been removed or isolated from continued use. Current track available for usage totals approximately 3.8 miles. All usable trackage is currently maintained to minimum track safety standards required for a Federal Railroad Administration Class 2 categorization.

4.7.7 Runways

Reilly Army Airfield is located north of the cantonment area and lies approximately 1,800 feet south of the northern installation boundary. The airfield consists of a 2,300-foot runway running east to west. Reilly Army Airfield is no longer available for fixed-winged airfield operations. The tarmac at the airfield has been converted to a defensive driving course range.

There are four authorized landing zones for rotary-winged aircraft on FMC: Center Pad FN116310, Noble Army Community Hospital Pad FN1222321, Alabama National Guard Pad FN125327 and Reilly Army Airfield FN129344.

The Anniston-Calhoun County Airport is located four miles south of Anniston. The airport has a 7,000-foot, lighted runway capable of servicing jet aircraft up to the Douglas DC-9 and Boeing 737 models. Military aircraft (C-130) can operate from this runway as well. One small airport, McMinn located within a 12-mile radius of the installation, is used for general aviation and chartered aircraft (Ebasco, 1992).

4.7.8 Incinerators

Two active incinerators are located on FMC: one at the Noble Army Community Hospital, and one at the Chemical Defense Training Facility.

4.7.8.1 Noble Army Community Hospital Incinerator. Located adjacent to the Noble Army Community Hospital, in Building 294, an infectious/pathological waste incinerator has been in operation since 1990. The incinerator currently burns approximately 1,000 to 1,200 pounds of regulated medical waste per month. Regulated wastes incinerated include cultures and stocks of infectious agents, pathological wastes, human blood and blood products, used sharps, isolation wastes, and unused sharps. The hospital

Figure 4-11 Infrastructure - Streets
8 1/2 x 11 (B & W)

incinerator does not treat hazardous wastes and, therefore, is not operated under a State Air Permit. It is approved for operation under the ADEM Air Division's "Existing Small" medical waste incinerator regulations. Wastes are burned twice a week and ash is removed from the incinerator weekly (ESE, 1997a). The incinerator ash, sampled annually for heavy metals using the toxic characteristic leaching procedure (TCLP), is double bagged and sent to ACMAR Regional Landfill in Moody, Alabama by an off-site contractor.

4.7.8.2 Chemical Defense Training Facility Incinerator. The Chemical Defense Training Facility (CDTF) is used for training military personnel in techniques of detection and decontamination of nerve agents. The facility has used its incinerator located in Building 4483 to dispose of generated wastes since February 1987. Operating under a State Air Permit, the incinerator treats non-hazardous wastewater, personnel protective clothing, and other solid waste such as plastic, paper, rubber, glass and metal. The ash generated from the incinerator is tested annually for total metals using TCLP to confirm that it is non-hazardous. The ash is double bagged and disposed in the industrial landfill. Gases generated from incinerator combustion are filtered through a particulate filter, and a series of carbon units, prior to discharge to the atmosphere.

Each year approximately 6,000 gas mask filters containing chromium VI are heated in separate incinerator loads to 1,050^{o}F for 15 minutes, a lower temperature than the typical 2,000^{o}F temperature needed to treat chromium VI. The residue remaining following the heating process is then drummed and disposed as discussed in subsection 4.9.2.

4.7.9 Energy

4.7.9.1 Electrical System. Electrical power is supplied to FMC and the Anniston area by the Alabama Power Company (APCO). The distribution network consists of 856,691 LF of overhead electrical lines and 1,057,000 LF of underground electrical lines. APCO supplies power to FMC through a 115-kilovolt (kV), 3-phase, 60-hertz transmission line which is part of a loop system allowing backfeed during emergency conditions. FMC receives power from a single electric substation located south of Galloway Gate, and the power is distributed by four primary distribution feeders. The substation, owned by APCO, has a maximum continuous rating of 22,400 kilovolt-amps (kVA). An additional 20,000 kVA could be delivered to FMC if required. Some facilities, such as the hospital, have generators capable of sustaining their power during a power outage.

In 1993 the average daily electrical demand at FMC was 12,263 kVA. The peak electrical demand was 17,640 kilowatts (kW). In 1993, the total electrical usage at FMC was 65,664,000 kilowatt hours (kWH).

4.7.9.2 Natural Gas. Natural gas is the primary fuel used for about 90 percent of the heated space at FMC. This natural gas is supplied by Alabama Gas Corporation (ALAGASCO). FMC is under contract to ALAGASCO to receive a maximum of 2.1 million cubic feet (MCF) of natural gas per day.

The natural gas distribution system consists of 26,038 LF of pipelines initially installed in 1965 (FMRRA, 1996). ALAGASCO supplies natural gas to FMC through a 10-inch, high pressure line that extends along Alabama Highway 21. The line temporarily increases to a 12-inch, high pressure line just prior to entering the post at Summerall Gate Road. Upon entrance to the installation, the line reduces to a 10-inch, high pressure line that continues along Summerall Gate Road to a metering station near 16th Avenue where it is regulated down to medium pressure and fed into the installation distribution system. Near the metering station is a peak shaving plant. This plant consists of five 30,000 gallon propane tanks. Liquid propane is blended with air to form a air-gas mixture that is used to supplement incoming natural gas during periods of peak demand.

In 1993, the average daily demand for natural gas at FMC was 12,645 hundred cubic feet (CCF). In 1993, the total natural gas demand for FMC was 483,862 MCF.

4.7.9.3 Fuel Oil and Steam. There are four central heating plants on the installation that have a rated output above 3,500,000 British Thermal Units per hour (BTU/hr). All of the plants are high pressure, steam boiler plants except one (Plant #4) which is a high temperature, hot water plant. Each plant supplies steam or high temperature hot water for heating, domestic hot water, and process steam.

Currently only three of the central heating plants are active (#1, #2, and #4). Plants 1, 2 and 3 are boilers. Plant #1 serves the 3100 Block area; Plant #2 serves the 2200 Block area and hospital (Buildings 292 and 295). Plant #3 serves the 1000 Block area but has been off-line for approximately 2 years. The 1000 Block area can also be backfed from Plant #2 as it is currently. Plant #4 serves the 1600 and 1800 Block areas and will remain as part of the reserve enclave. The four plants are equipped with dual burners for natural gas, or No. 4 or No. 6 fuel oil. Natural gas is primarily used in normal operations.

4.7.10 Communications

The telecommunications system at FMC includes an extensive standard (copper) cable network, limited fiber optic cable, and related switching equipment that are connected to an off-post service provider. Bell South Company provides telecommunications services to FMC.

FMC has approximately 266,000 feet of copper cable divided into 14 branch cables. The total number of wire pairs in the branch cables range from 50 to 1,800. Approximately 50% of the wire pairs are currently in use; an estimated 8% of the wire pairs are considered defective. The cable has been extended onto FMC mounted aerially on poles, direct buried, and within utility ducts. Aerially mounted cable is carried on approximately 800 poles. Of these poles, 300 are dedicated to telephone cable and the remaining are jointly used for other services.

The cable has been connected to Integrated Services Digital Network (ISDN) equipment capable of providing high-speed computer data communications at a number of buildings at FMC. The ISDN equipment is provided by Bell South for all service except the communications line between the Emergency Operations Center (Building 120) and the Joint Information Center (Building 2203).

FMC has approximately 5,000 feet of twelve-pair fiber optic cable, with two pairs currently in use. The cable is located in underground ducts, accessible by 11 manholes. The two fiber optic lines leave the main post at Summerall and Baltzell Gates. Fiber optic lines also connect the main switch at Building 251 to the remote switch at Noble Hospital (Building 292).

4.8 ORDNANCE AND EXPLOSIVES

Throughout its history, FMC has been used as an artillery and small arms training facility. Figure 4-12, taken from the “BRAC Ordnance, Ammunition and Explosives Archives Search Report” depicts the areas at FMC that have been potentially used for ordnance training activities (USACE, 1997). Figure 4-13, from the “Environmental Baseline Survey” illustrates historic and current training and UXO areas at FMC (ESE, 1998a). These figures document that large portions of FMC may contain unexploded ordnance.

FMC has been used for artillery training since the Spanish American War (NSA, 1992). FMC's location was originally chosen for its location in the Choccolocco Mountains which serve as a backstop for artillery training. FMC staff report that artillery rounds over 12 inches long have been found on mountain slopes (FMC, 1995b).

FMC has established Dud Impact Areas south of Ranges 16 and 17. The Dud Impact Areas are those locations where duds have been found. A dud is any munition which was not armed as intended or which has failed to explode after being armed. Dud ordnance is considered very hazardous. These two areas are posted and are permanently off limits to all civilian and military personnel. Range operations are now conducted in a manner designed specifically to minimize the production of duds. Range personnel currently report duds that occur during firing practice or are discovered on the ground. Range personnel contact Range Control, and they call the 722nd EOD to immediately handle the UXO hazard (ESE, 1998a)

Locations of current ranges are well marked and accurately recorded. Few maps are available detailing historical ranges.

4.8.1 Current Ordnance Ranges

Current ranges consist of ranges commonly known to active personnel at FMC. They are retained in the database of real property and are clearly identified on the FMC Main Post Training Map. Several of the extant ranges have been closed and are no longer in use, however, they are not fenced or otherwise secured. There are 22 extant ranges on the FMC Main Post. Table 4.12 summarizes these ranges. Detailed information for these sites is provided in the FMC EBS document (ESE, 1998a).

4.8.2 Inactive Ordnance Ranges

Ordnance ranges have been constructed and abandoned throughout the history of FMC. More than 30 former firing ranges were identified on FMC during the EBS that are no longer carried on the DEH database of real property. The existence of these ranges is still generally unknown to current FMC personnel. These ranges have been abandoned, and are now largely or completely overgrown by vegetation, and were not documented by previous environmental reports. Table 4.13 summarizes these historic ranges. Detailed information for these sites is provided in the FMC EBS document (ESE, 1997a).

Figure 4-12 Potential Locations of Unexploded Ordnance at Fort McClellan
(USACE ST LOUIS DISTRICT MAP)
11 x 17 (B & W)

Figure 4-13 Potential Training & UXO Areas at Fort McClellan
(COMBINE 2 MAPS FROM EBS)
11 x 17 (B & W)

Table 4.12 Current Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
Range 12 Competitive Pistol	Southwest Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: .22-cal Machine gun: Machine gun (1960's) Shotgun: 12 gauge--no slugs	1951 to present
Range 13 Qualification Pistol (USMC) Range	Southwest Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge-no slugs	1951 to present
Range 18 Down Range Feedback Range	Southcentral Main Post	Rifle: M-16, day/night phase, tracer, M-103 Springfield, M-1 Grenade, and machine gun.	1940 to present
Range 19 Qualification Pistol Range	Southwest Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Shotgun: 12 gauge--no slugs	1976 to present
Range 20 Infiltration Course	Central Main Post	Pistol: .22-cal; .38-cal; .45-cal; 9mm Rifle: M-60 with tracer Shotgun: 12 gauge--no slugs Other: dynamite, TNT, and C4	1980 to present
Range 21 Field Fire Range (Dry Fire, Protective Mask and Night Fire)	Eastcentral Main post	Rifle: M-16 with tracer	1980 to present
Range 22 Zero Range (25m)	Eastcentral Main Post	Rifle: M-16 with tracer	1961 to present
Range 23 Trainfire Range (Record, M-16 Qualification, NBC and Night Fire)	Central Main Post	Rifle: M-16 with Tracer Other: Misc artillery (date unknown)	1951 to present
Range 24 Lower Combat Indoctrination Range	Eastcentral Main Post	Rifle: M-16 blanks Other: Flares	unknown to present
Range 24a Multi-Purpose Range (Smoke, Demolition, and Flame Field Expedient (FFE))	Southeast Main Post	Rifle: M-14, M-16, and other rifles (including tracer rounds) Machine Gun: M-60 and machine guns (including tracer rounds) Other: C4, TNT, M-4 burster, blasting caps, simulators, trip flares, detonation cords, & smoke-producing munitions/ equipment	1950s (approx) to present
Range 25 Known Distance Range (100-600 yards)	Central Main Post	Rifle: M-14, M-16, and M-1 Machine Gun: M-60, and tracer. Other: Artillery rounds.	1940 to present
Range 26 Live Fire and Maneuver Range	Central Main Post	Rifle: M-16 (since 1983) Other: Possible historical use of large caliber fused ordnance and large caliber weapons	Recent use 1976 to present. Historic use unknown
Range 27 Special Operations Range	Eastcentral Main Post	Pistol: 9mm; .38-cal; .45-cal Rifle: M-16 (1983-1989)	1976 to present

Table 4.12 Current Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
(Stress Pistol and Shotgun)		Machine Gun: M-60 and other Machine Guns Shotgun: 12 gauge (no slugs) (1989 to present)	
Range 28 Target Detection Range	Central Main Post	Rifle: M-16 blanks	1961 to present
Range 29 Weapons Demonstration and U.S. Weapons Range	Central Main Post	Pistol: .38-cal; .45-cal; 9mm Rifle: M-16 Machine Gun: M-60 Other: C-4, TNT, AT-4 Rocket, M-136, M-203, smoke, M-72 LAW, as well as the potential for historical use of fused ordnance	1977 to present. Historic use unknown.
Range 32 Hand Grenade Range	Southcentral Main Post	Other: Hand grenades (practice and live)	1987 to present
MOUT	Northcentral Main Post	Other: Limited to blanks, flares, and simulators	1989 to present
Skeet Range	Southwest Main Post	Shotgun: .410, 12, .20, .28 gauge	1988 to Present

Source: ESE, 1998

Table 4.13 Former Ordnance Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
Range 16 Grenade Launcher Range	Southwest Main Post Within Dud Impact Area	Other: Misc including M-203 (40mm) grenade, M-72 LAW, M-18(claymore mine), 3.5-rockets (bazooka), and hand grenades	1951 -1994
Range 17 Explosives Proficiency Training Area	Southwest Main Post	Multiple - adjacent to permanent dud area	1977-1994
Range 24 Upper Defensive Techniques	Eastcentral Main Post	Rifles: M-16 with tracer and flares	1983 - 1990
Range 30 Confidence Course	Northwest Main Post	Rifles: M-16 blanks (1977-1983) Machine Guns: M-60 and .30-cal (historic use)	1977-1983. Historic use unknown.
Range 31 Weapons Demonstration Range	Northwest Main Post	Pistol: .45-cal, .38-cal, Rifle: 90mm recoilless, M-16 Machine Gun: .50-cal; M-60 Shotgun: Other: M-72 (demo), and M-203 Demo most recently. Historical use includes 66mm incendiary rocket/TEA, flash, AP, and HE.	1951-1985. Historic use unknown.
Two Former Tank Ranges	North of Range 31 and East of Reilly Field	Unknown	Unknown Appear on 1956 & 1959 maps

Table 4.13 Former Ordnance Ranges - FMC Main Post			
RANGE	**LOCATION**	**ORDNANCE TYPES**	**TIME PERIOD**
Seven Former Rifle & Machine Gun Ranges	Northern Main Post	Unknown	Unknown 4 ranges were in use in 1917 the other 3 appear on 1959 & 1966 maps
Former Mortar Firing Point	French Hill Quarry	Unknown	Unknown
Two Former Grenade Ranges/Areas	Northern Main Post	Unknown	Unknown Appears on 1959 map
Former Mortar Range	Within current Range 22 surface danger area	Unknown	Unknown Appears on 1959 map
Six Former Rifle Ranges	Two within the Range 20 boundaries, one east of Range 16, one north of the ammunition supply point, and two at unspecified locations	Unknown	Unknown Appear on various maps from 1946, 1948, and 1959.
Former Machine Gun Range	Western end of current Range 24A	Unknown	Unknown Appears on 1959 map
Former Demolition Area	Central portion of current Range 24A	Unknown	Unknown Appears on 1959 map
Former Large Caliber Weapons Range	West of current Range 13	Unspecified large caliber weapons and unidentified rifle	Unknown Appears on 1957 aerial photos and a 1959 map
Former Rifle Range	West of current Range 13	Unknown	Unknown Appears on 1957 aerial photos
Former Small Arms Range	West of current Range 13	Unknown. Possibly used as a short pistol range.	Unknown Appears on 1957 aerial photos
60mm Mortar Range	Main Post boundary near Summerall Gate	Unknown	Unknown Appears on 1946 & 1959

Table 4.13 Former Ordnance Ranges - FMC Main Post			
RANGE	**LOCATION**	**ORDNANCE TYPES**	**TIME PERIOD**
	- Direction of fire toward the western & northern slopes of Baltzell Hills		maps
Former Artillery Training Area	Much of the Eastern Main Post including the cantonment area east of Rock Hollow Road	Various large caliber fuzed rounds	Unknown Appears on 1921 map
Former Bandholtz Machine Gun Qualifying Range	Southeast Main Post Current Range 24A	Unknown small arms and machine gun rounds	Unknown Appears on 1948 map
Former Bandholtz Field Firing Range No. 2	Southeast Main Post	Unknown small arms	Unknown Appears on 1948 map
Former Defendam Field Firing Range	Northern Main Post West portion of current Range 31	Unknown small arms	Unknown Appears on 1948 map
Former Pistol Ranges, Buildings 141 & 143	Buildings 141 & 143	Pistol: .22-cal	Unknown
Former Rifle Grenade Range North of Washington Ranges	Current Range 19	Unknown arms and grenades	Unknown Appears on 1946 map
Former Rifle Grenade Range at Skeet Range	Current Skeet Range	Unknown arms and grenades	Unknown Appears on 1946 map
Former Range 25 East	Companion Range to current Range 25	Unknown small arms	Unknown Appears on 1937 map
Former Pistol Range south of Range 25	South of current Range 25	Unknown	Unknown Appears on 1937 map
Former Defendam Range (eastern)	Northern Post Boundary and the western slope of the Choccolocco Mtns.	Unknown. Possibly used as a machine gun fire range	Unknown Appears on 1946 map
Former Machine Gun Range	South of current Range 25	Unknown. Presumably used as a machine gun fire range	Unknown Appears on 1946 map

Table 4.13 Former Ordnance Ranges - FMC Main Post			
RANGE	**LOCATION**	**ORDNANCE TYPES**	**TIME PERIOD**
Former Pistol Range	Current Range 23	Unknown. Presumably used small arms range	Unknown Appears on 1946 map
Former Machine Gun Transition Range	Current Range 17	Unknown	Unknown Appears on 1946 map
Former Rocket Launcher Range	In the vicinity of current Range 17	Unknown	Unknown Appears on 1946 map
Former Antitank Range	North of the Ammunition Supply Point	Unknown Presumably includes 37mm antitank as well as M-1 rifle	Unknown Appears as antitank range on 1946 map and as a M-1 range on 1964 map
Former Range O.Q.-2A	Main Post boundary near Summerall Gate	Unknown	Unknown Appears on 1946 map
Area 45	Several former ranges located in the area south of Summerall Gate Road, east of FMC boundary, and west of Area 31	Unknown	Unknown
Former Trap and Skeet Range	East of Building 1345	Unknown. Presumably Shotgun use only	Unknown. Appears on March 1973 aerial photos
Former Weapons Demonstration Area	Southeast of Summerall Gate Road on the Western Main Post	Unknown.	Unknown. Appears on 1957 aerial photos
Former Probable Range	Southwestern Main Post	Unknown.	Unknown
Former 81mm Mortar Range	Northeastern corner of Main Post	Unknown. Presumably used for 81mm mortars.	Unknown. Appears on 1949, 1954, and 1961 aerial photos.
Impact Areas North-Central Main Post	Three separate, small areas in Northcentral Main Post east	Unknown. Presumably large caliber weapons and small arms.	Unknown. Appears on 1949 aerial photos.

Table 4.13 Former Ordnance Ranges - FMC Main Post

RANGE	LOCATION	ORDNANCE TYPES	TIME PERIOD
	of Range 30		
Impact Area near Stump Dump	Between Reservoir Ridge and the Stump Dump	Unknown	Unknown. Appears on 1961 aerial photo composite.
Impact Area Northeast Main Post	Northeastern Main Post	Unknown	Unknown. Appears on 1961 aerial photo composite.
Impact Areas Central Main Post	Five areas near Ranges 21 and 22 adjacent to Bains Gap Road	Unknown. Presumably includes mortars.	Unknown. Appears on 1949, 1954, and 1961 aerial photo composites.
Impact Area in Central Main Post	Downrange portion of current Range 29.	Unknown. Presumably large caliber weapons and small arms.	Unknown. Appears on 1949 aerial photo composite.
Main Post Impact Areas	Twelve specific areas and one general area including: 1) southwestern post boundary 2) north of current Range 25 3) west of Range 23 4) Current Range 23 quarry 5) eight scattered locations and 6) locations on the western slopes of the Choccolocco Mtns	Unspecified ordnance including large caliber ordnance, mines, mortar rounds, canister shot, and 75mm projectiles	Unknown

*Source: ESE, 1998*a

4.9 HAZARDOUS AND TOXIC MATERIALS

The characterization of the FMC baseline conditions for hazardous and toxic materials at FMC is currently under way as part of the Environmental Baseline Survey (EBS). Based on record reviews, interviews, and site inspection, the purpose of the EBS is to identify sources of contamination on and adjacent to FMC and any response actions that have been taken. The following paragraphs describe FMC's hazardous materials storage and handling status; hazardous waste disposal process; contaminated sites; and non-CERCLA hazards, such as radon, asbestos, polychlorinated biphenyls (PCBs), and lead-based paint (LBP).

4.9.1 Storage And Handling Areas

The installation operates a hazardous waste management program for the disposal of hazardous wastes in compliance with Resource Conservation and Recovery Act (RCRA) regulations. FMC is classified as a Large Quantity Generator of hazardous wastes (USEPA Identification Number AL4210020562).

Materials storage and handling areas are currently used for the following hazardous, toxic materials, or bulk oil: hazardous waste, flammable materials, pesticides/herbicides, fog oil, PCB transformers, ammunition, radiological materials, and chemical/biological agents. Appendix A of the Spill Prevention Control/Countermeasures Plan and Installation Spill Contingency Plan (SPCC) (FMC, 1996b) contains a list of the oil and hazardous substance storage, handling and transfer facilities. Areas formerly used for hazardous, toxic, or bulk oil materials storage and handling include the following: Former Ordnance Motor Repair Area, Battery Maintenance and Storage Areas, DRMO Facility, Waste Chemical Storage Area, Former Pentachlorophenol Dip Tank, Multi-Craft Shop, Former Dry Cleaning Area, Former Chemical Laundries, Former Fog Oil Storage Areas, Former Quartermaster's Gasoline Storage and Former Fuel Yard and the contractor laydown area (PCB transformers).

Hazardous Storage Area. The current Hazardous Storage Facility (Bldg. 348) was built in 1989 to consolidate all of the hazardous wastes generated on the post. Weekly inspections are performed of the building. No spills or releases have been documented at this building (ESE, 1998a).

Flammable Storage Areas. There are nine flammable storage buildings (Bldgs. 207, 681, 1377, 1830, 2117, 2282, 3141, 8417, and 9207) noted by the Real Property Office. Many of these are paint lockers and small storage areas that are kept locked. No releases or spills have been documented at these sites (ESE, 1998a). In addition to the storage buildings, there are numerous flammable storage lockers, including paint lockers, at FMC that are not on the Real Property Books.

Pesticide/Herbicide Mixing and Storage Areas. The primary facility used for pesticide and herbicide mixing and storage moved from Bldg. 208 in 1986 to its present location at Bldg. 211. Pesticides and herbicides formerly stored in Bldg. 208 include: Dursban, Xtraban Roach Concentrate, Diazinon 4E, Sevin, Malathion, Killmaster II and Prohibit Insecticide. Pesticides currently stored in Bldg. 211 include Dursban LO, Roundup, Orthene, Malathion, 2-4D, and Award (ESE, 1997a). Although no spills or releases have been documented at Bldg. 208, soil sampling in this area in 1985 indicated that some insecticide residues (e.g. chlordane metabolites; methoxychlor; hexachlorobenzene (HCB); p,p'-DDT; and dieldrin) were present. The levels of these chemicals were determined not to exceed levels that would be harmful to human health or the environment (ESE, 1998a).

The Golf Course Pesticide Mixing and Storage Facility (Bldg. 2252) began operations in 1985 (ESE, 1998a). No releases have been reported and no sampling has been done at the site. Building 2252 is reported to be in full compliance for pesticide storage and handling (ESE, 1998a). Limited pesticide storage for household application occurs in Self Help/You Do It (Bldg. 3214) as of 1995.

Fog Oil Drum Storage Areas. FMC has one fog oil drum storage area located near Range 24A. The fog oil storage area is equipped with an oil/water separator which discharges to nearby surface waters (ESE, 1998a). Records indicate that FMC was not in compliance with the NPDES permit for the facility. This

was due to erroneously low discharge limits in the permit. The state regulators corrected the permit limits after reevaluating the calculations used to establish the limits; thus, the facility was and is in compliance.

PCB Storage Facility. Transformers removed from service, awaiting testing or disposal are currently stored in the PCB Storage Facility (Bldg. 4460). Used transformers found to be free of PCBs are currently stored on a concrete pad adjacent to Bldg. 4437. There are no records of reportable spills at either of these facilities (ESE, 1998a).

Ammunition Supply Point. The Ammunition Supply Point is located at central FMC and has been used from 1917 to the present. Activities at this site include storage of ordnance, radiological material, and chemical agents. Red phosphorous and binary chemical agent components are currently stored in Bldgs. 4421 and 4416 respectively. There are no reported releases of chemical agent or radiological material and no unexploded ordnance issues are reported (ESE, 1998a).

Radiological Training Areas. Many of the training activities at FMC involve the use of radioactive material and equipment. The largest user of these resources is the U.S. Army Chemical School. FMC operates under three Nuclear Regulatory Commission (NRC) licenses described in subsection 4.10, Permits and Regulatory Authorizations. Disposal of radioactive waste is handled by the NRC license manager using the contract administered by the Radioactive Waste Disposal Division of the Army's Industrial Operations Command. Table 4.14 presents a summary of the areas where radiological materials were handled during training, storage, or disposal according to the EBS (ESE 1998a/b). Radiological investigations and actions completed to date indicate that all sites except 3181, 3180 and 3192 are free from radiological contamination. Site 3181 requires additional investigation to assess potential contamination. Sites 3180 and 3192 have been partially remediated but may require additional investigations and remedial actions.

Chemical/Biological Training Areas. There are several areas identified where the installation formerly conducted NBC training in the detection, decontamination, response to, and transfer of chemical and biological agents. The areas include: Former Detection and Identification Area, Biological Simulant Test Area, Toxic Hazards Detection and Decontamination Training Area, Former Agent Decontamination Training Area, Technical Escort Reaction Area, Former Chemical Munitions Disposal Area, Former Technical Escort Reaction Area, Old Toxic Training Area, and the HD Spill/Burial Sites (5-each).

Table 4.14 Current and Former Radiological Facilities and Training Areas

Area	Title	Radiologic Material
RADIOLOGICAL FACILITIES		
Building 3192	Hot Cell Facility *	Co-60, Cs-137
Building 3182	Laboratory W	Cs-137, Co-60
Building 3180	Laboratory/w Vault	Cs-137, Co-60, U-233, and Ra-226
	Pad	Sr-Y-90
	Radioactive Waste Storage Yard	Co-60
Building 228	Radiological Calibration Facility	Sr-Y-90, Pu 239
Building 1081	Radiological Source Storage	Multiple Materials
Building 3181	Isotope and Scaler Laboratories	Sr-Y-90, Pu, Co-60, Au-186, Re-198, and Cs-137
OTHER FACILITIES		
Building 2281	ACMLS Bradeley Rad. Lab Vault	Unknown

Table 4.14 Current and Former Radiological Facilities and Training Areas		
Area	**Title**	**Radiologic Material**
Building 4416	Storage	H-3, and Cs-137
Building T-812	Former Storage Vault	Ra-226
TRAINING AREAS		
Iron Mountain (within Range 18A)	Burial Grounds	Co-60, Th-204, Ra-226, Cs-137, and Sr-90
Bromine Field (south of Bldg 3192)	Training Area	Br-82
Alpha Field (southeast of Bldg 3192)	Training Area	U-233 and U-238
* Currently contains radiologic materials (ESE, 1998a).		
Source: FWEC, 1996b: FMC, 1994 : and ESE, 1998a		

Chemical Defense Training Facility. A variety of hazardous and non-hazardous materials are stored and used in the training conducted at the CDTF. After use, these materials are disposed of as detailed in subsections 4.7.8.2 and 4.9.2.

4.9.2 Uses And Disposal Of Hazardous Materials

Hazardous and toxic materials at FMC include explosives, petroleum products, herbicides and pesticides, pathological wastes, radioactive wastes, and chemical toxic wastes, including those associated with approximately 6,000 gas mask filters containing chromium VI from the Chemical Defense Training Facility (as discussed in subsections 4.7.8.2 and 4.9.2). Various companies are contracted through the Defense Reutilization and Marketing Office (DRMO) to remove these hazardous wastes from post for proper disposal. Table 4.15 lists the hazardous waste generated by various organizations in fiscal year 1993.

Table 4.15 Types of Hazardous Wastes Generated	
Batteries Chemicals Contaminated Fuel Contaminated Soil Contaminated Tanks Decon Kits Drugs Filters Filter Ash (heated residue from gas mask filters at CDTF)	Formaldehyde Medical Wastes Mercury Oil Sludge Paint/paint thinner PEG 200 Photo waste Solvents Transformers
Source: FWEC, 1996: FMC, 1994	

4.9.3 Contaminated Sites

Over the years, multiple programs have been under way to define the environmental condition of FMC land areas, including those related to the Installation Restoration Program (IRP), RCRA, Community Environmental Response Facilitation Act (CERFA), and non-CERCLA programs. The current status of these efforts is summarized using the CERFA categories. The standardized CERFA categories are used to group areas based on the past presence or absence of hazardous materials and the status of any remediation identified. The CERFA categories are used to indicate the potential for transfer of Army property. Properties in CERFA categories 1 through 4 are suited for property transfer with no further action. Properties in categories 5 through 7 must be investigated and, where necessary, remediated prior to transfer. Properties for which environmental remediation has not been completed can be transferred (deeded) under Section 334 of the National Defense Authorization Act. For such properties, the covenant required by CERCLA Section 120(h) is delayed until remediation and any other special conditions are met.

Information developed from the EBS was used to group areas on FMC into the standardized CERFA parcel categories using DOD guidance. Figure 4-14 illustrates the location of the areas categorized into CERFA categories 2 through 7. The CERFA parcels categorized as 2 through 7 are those areas where there has been storage or a release of CERCLA hazardous substances, chemical warfare materials or petroleum products. One hundred eighty-nine (189) CERFA category 2 through 7 parcels were identified in the EBS, comprising over 770 acres. Included within these parcels are sites previously identified for the Installation Restoration Program. Detailed information regarding the nature of potential/existing contamination and ongoing investigations and remediation activities can be obtained from the FMC EBS (ESE, 1998a/b).

Those CERFA parcels requiring additional investigation and potential remedial actions will be addressed in the BRAC Cleanup Plan.

4.9.4 Other Hazards

Non-CERCLA parcels at FMC are illustrated in Figure 4-15.

Asbestos. Identification and sampling of asbestos-containing material (ACM) has been conducted at FMC since 1984. Based on available information, the following surveying and sampling have been conducted.

- An asbestos survey of 94 miscellaneous buildings was conducted by ATC, Inc., in 1987. Friable ACM was identified in 53 of the 94 buildings surveyed, and 88 of the buildings surveyed contained potential hazards presented by nonfriable suspect material.
- An asbestos survey of 56 buildings was conducted by Environmental Management, Inc., toward the end of 1986 to early 1987. ACM was identified in 47 of the 56 buildings. Friable ACM was identified in 21 of the 56 buildings.

Figure 4-14 CERFA Parcels, Fort McClellan
11 x 17 (COLOR)

Figure 4-15 Non-CERCLA Parcels, Fort McClellan
11 x 17 (COLOR)

- An asbestos survey of 21 buildings was conducted by Environmental Management, Inc., during July 1986. ACM was identified in all 21 buildings. Four buildings were identified as containing asbestos only in floor tiles.
- Other data are also available for samples collected between 1984 and 1989 for various buildings and materials.

When a building that contains suspect asbestos is scheduled for renovation/demolition, an asbestos survey is conducted.

Appendix J of the EBS contains a table that lists by building number, all suspected buildings containing asbestos, the date surveyed, and the results (ESE, 1998b). A survey is currently underway to characterize the remaining buildings on FMC that are considered excess property.

Radon. Radon is a naturally occurring radioactive gas that is produced through the normal decay of uranium and thorium found in rocks and soil. The USEPA has suggested that the average long-term exposure limit is 4 picoCuries/liter of air. Retesting is suggested for levels obtained between 4 and 20 picoCuries/liter. If retesting confirms a level above 4 picoCuries/liter, remedial measures are recommended. FMC entered into the Army Radon Reduction Program in 1989. Buildings considered for radon testing were placed into three groups. Priority 1 structures are defined as schools, hospitals, housing, and billets. Priority 2 structures are defined as buildings housing 24-hour operations. Priority 3 structures are defined as all other routinely occupied structures.

According to the 1995 TRADOC Status of Radon Testing Report, Fort McClellan had 371 buildings classified as Priority 1, 25 buildings classified as Priority 2, and 318 buildings classified as Priority 3. All 371 of the Priority 1 Structures were tested and 4 buildings contained elevated levels of radon. Buildings 7 and 10, Priority 1 structures, had radon levels between 4.1 and 8.0 pCi/L and Buildings 102 and 141A, also Priority 1 structures, had radon levels between 4.1 and 16 pCi/L. Buildings 7, 10, 102, and 141A have been mitigated. Of the Priority 2 structures, 20 of 25 structures have been tested and results indicate levels below the 4.0 pCi/L limit in 19 structures. Building 3295 tested between 4.0 and 8.0 pCi/L and was remediated. Of the Priority 3 structures, 60 buildings have been screened and 59 tested below 4.0 pCi/L. Building 129 which is vacant tested in the range of 8.1 to 12.0 pCi/L (ESE, 1998a).

Table 4.16 summarizes the status of the FMC Radon Reduction Program.

Table 4.16 Status of Radon Program

Type	Buildings Classified as Type	Buildings with Testing Completed	Buildings Mitigated	Buildings under Long-Term Monitoring
Priority 1	371	371	4	0
Priority 2	25	20	1	0
Priority 3	318	60	0	0

*Source: ESE, 199*8a

Lead Paint. Lead-based paint (LBP) testing was conducted on various buildings by the U.S. Army Corps of Engineers (USACE), South Atlantic Division Laboratory (SADL), and the LBP Risk Assessment Report was developed by John Calvert Environmental, Inc. (JCE) in July 1995. According to the JCE report, the April 1990 HUD Guidelines for LBP survey procedural protocol were followed. LBP testing was conducted on a sample of 23 community-related buildings (i.e. churches, recreational centers, and health care facilities) and 171 family housing buildings. The uniformity of the type of paint used, the type of construction, and the age of the family housing buildings allowed for formation of 12 housing groups. LBP was present on interior and exterior surfaces of many of the buildings sampled. The LBP varied from good to poor condition. Some areas containing LBP were noted as being potentially accessible to children. Appendix K of the EBS contains a table that summarizes the LBP findings in the buildings tested (ESE, 1998b).

Polychlorinated Biphenyls (PCBs). By definition, electrical equipment is "PCB-contaminated" if it contains between 50 and 499 ppm of PCBs. A "PCB Transformer" is defined as any transformer containing 500 ppm or greater of PCBs. Four areas at FMC have been considered associated with historic and present PCB use, storage, or disposal: 1) the PCB Storage Facility (Building 4460); 2) the Temporary Transformer Storage/Staging Area (pad adjacent to Facility 4437); 3) DRMO/PDO areas (T-342 and 1800 area); and 4) the active transformers in service on post. PCB and PCB-contaminated transformers removed from service are stored for disposal in the PCB Storage Facility (Building 4460) on FMC and managed by the Directorate of Environment (DOE). This facility is a concrete slab with curbing that is covered by a roof and enclosed within a cyclone fence. Transformers are stored within the facility until disposal can be accomplished (ESE, 1998a). In the past, PCB and PCB-contaminated transformers were stored on the pad adjacent to Facility 4437, and lots at T-342 and 1800. A quarterly inspection program is performed on all in-service transformers and capacitors, and a log of these inspections is maintained.

In December 1984 there was a project drafted to remove all PCB capacitors on the installation. In January 1992 all pole or pad mounted transformers on post (with the exception of six in the substation, three in Building 141C, and three in Building 162) were sampled for PCBs and a database was compiled. At the end of 1995, 29 transformers with PCB concentrations greater than 50 ppm but less than 500 ppm remained operational. Appendix L of the EBS lists the locations of the 29 transformers (ESE, 1998b). These 29 transformers were removed and properly disposed in 1996. Disposal of PCB and PCB-contaminated transformers is accomplished through DRMO (ESE, 1998b).

Twelve transformers remain on the installation that were not tested for PCB content in 1992. Six are located in the electrical substation, three in Building 141C, and three in Building 162. They were tested in FY98. Of the six transformers in the substation, three had PCB concentrations between 50 and 499 ppm. The transformers in building 141C and 162 did not contain PCBs.

4.9.5 Storage Tanks

Underground Storage Tanks. There are 18 current UST sites located at FMC. Appendix D of the EBS lists these tanks, their locations, capacity, and type of fuel contained. The majority of these USTs contain Diesel Heating Oil No. 2. No. 2 oil is the main heating oil used at FMC. No. 2 oil is a non-regulated fuel in the State of Alabama. The remainder of the storage-only USTs contain diesel, heating oil #4, and oil (ESE, 1998a).

Thirteen USTs were closed in 1994 under the guidance of ADEM. The majority of these USTs contained waste oil. Six tanks were closed in-place; of those, four were replaced by new USTs, and two were not replaced. Seven tanks were excavated; of those, five were replaced by new USTs, and two were not replaced. Nine USTs were previously removed from FMC but no closure reports were on file at either FMC or ADEM (ESE, 1998a).

In 1991, Preliminary Investigations identified five additional sites of former USTs. Each of these sites stored petroleum products such as gasoline, diesel, and diesel based heating oil.

A secondary investigation identified Building 265, POL, and Building 2109, the Post Service Station, as being sites of multiple USTs. A number of tanks have been removed from these sites over the years, many remain or have been replaced. Monitoring wells have been installed at the Building 265 and 2109 sites. Both sites have been cleared for no further action. Building 3299, Motor Pool, had one leaking UST removed in 1989. Monitoring wells were installed at this site. This site has been recommended for no further action (ESE, 1998a).
Twelve locations at FMC were identified during the EBS as former gas station locations. Four USTs were removed from two of these station locations in 1991. Five of the other sites have been identified, but the status of USTs at these locations has not yet been determined. The remaining five sites were noted as either having no evidence of a foundation to mark the location or not found during the investigation.

Two USTs may exist at Building 598, the site of the former Pesticide Storage Building and a former vehicle maintenance building. In 1989, the building burned and records no longer exist concerning USTs associated with this site (ESE, 1998a).

Aboveground Storage Tanks. Aboveground Storage Tanks (ASTs) are divided into four categories at FMC: Bulk Storage Area, CDTF, propane, and Storage-Only No. 2 Heating Oil. Appendix D of the EBS lists ASTs located at FMC (ESE, 1998a).

The Bulk Storage Area at Building 296 consisted of six 25,000 gallon ASTs and one 10,000-gallon AST. No. 4 fuel was stored in five of the large tanks, while the remaining one stored No. 2 fuel (diesel). It is unknown what product was stored in the small tank. A concrete berm and pad was located around the Bulk Storage Area. The seven ASTs were removed in 1997 and the area was graded and stabilized with grass. A new bulk storage area was constructed within the 800 area.

Three ASTs are located at the CDTF. One of the tanks is a 4,000-gallon (15,200 liter) tank that previously held sulfuric acid; it has been empty for several years. A second tank is a 4,000-gallon AST that currently holds a caustic soda solution. Both of these tanks have lines that feed into a 20,000-gallon (76,000 liter) wastewater AST. These lines are used to neutralize the wastewater before it is incinerated (ESE, 1998a).

Five propane storage tanks of 30,000 gallons each are used for Facility 3217.

Many of the range offices are used infrequently and have small heating tanks. It is more cost effective for FMC to maintain small heating oil ASTs at these remote buildings than to heat the buildings by other means during the winter.

4.9.6 Spills

A few minor spills have occurred at FMC. In all instances, the spills were collected and cleaned up and, where necessary, any contaminated soil was excavated and disposed off site.

4.10 PERMITS AND REGULATORY AUTHORIZATIONS

This section provides a baseline of the environmental permits and licenses associated with the affected environment. This is not an all inclusive list of permits required or obtained by the installation. These existing permits may require review based on the proposed actions. Table 4.17 provides information about the existing environmental permits held by the installation for its activities.

Table 4.17 Environmental Permits

Title of Permit	Permit Number	Issuing Agency	Issue Date	Duration	General Conditions
Air Permits Boilers	1. 301-0017-Z008	Alabama Department of Environmental Management	1. 5/3/89	Life of boiler	Operate: 1. 4 gas/oil-fired boilers (one 9.279-mm Btu/hr, three 28,000,000 Btu/hr) for Boiler Plant 1
	2. 301-0017-Z002		2. 5/9/82		2. 2 gas/oil-fired boilers (51,500,000 Btu/hr) for Boiler Plant 2
	3. 301-0017-Z001		3. 5/4/81		3. 3 gas/oil-fired boilers (40,626,000 Btu/hr) for Boiler Plant 3
	4. Grandfathered				4. Boiler Plant 4
Air Permits Storage Tanks	1. 301-0017-Z004 2. 301-0017-Z005 3. 301-0017-X009 4. 301-0017-X010 5. 301-0017-X011 6. 301-0017-X012 7. 301-0017-Z013 8. 301-0017-Z014	Alabama Department of Environmental Management	1. 12/7/78 2. 12/7/78 3. 10/25/91 4. 10/25/91 5. 10/25/91 6. 10/25/91 7. 10/21/94 8. 10/21/94 9. 8/4/95	Life of storage tank	Operate: 1. 2 gasoline storage tanks (12,000 gallons each) for Facility T-263 2. 3 propane storage tanks (30,000 gallons each) for Facility 3217 3. 1 fuel/oil storage tank (15,000 gallons) for Building 1076 4. 1 fuel/oil storage tank (15,000 gallons) for Building 1076 (Outboard) 5. 1 fuel/oil storage tank (20,000 gallons) for Building 3176 (East) 6. 1 fuel/oil storage tank (20,000 gallons) for Building 3176 (West) 7. 4 gasoline storage tanks (12,000 gallons each) at Building 265 - POL Gasoline Dispensing Facility 8. 4 gasoline storage tanks (10,000 gallons each) at Building 2109 - AAFES Gasoline Dispensing Facility 9. 4 gasoline storage tanks (12,000 gallons each) at

Table 4.17 Environmental Permits

Title of Permit	Permit Number	Issuing Agency	Issue Date	Duration	General Conditions
	9. 301-0017-Z015				Building 265 - POL Gasoline Bulk Plant
Air Permits Incinerators	1 . 301-0017-Z007	Alabama Department of Environmental Management	1. 12/17/92	Life of incinerator	Operate Chemical Defense Training Facility Incinerator with wet scrubber
RCRA Permit	1. AL4210020562	USEPA	1.		Large Quantity Generator & 90 day Storage Facility
Solid Waste Permit **(Sanitary Landfill Closed)**	1. 08-02R	Alabama Department of Environmental Management	1. 5/1/87	Expired	Disposal of approved waste which includes household garbage and rubbish, and commercial solid waste (i.e. wooden pallets, paper, and demolition waste)
Solid Waste Permit Industrial Landfill	1. 08-02	Alabama Department of Environmental Management	1. 10/12/95	1. 10/12/95 - 10/11/00	Disposal of approved industrial waste which includes construction & demolition waste and/or rubbish. Construction debris includes, but is not limited to, masonry materials, sheet rock, roofing waste, insulation, rebar, scrap metal, paving materials, and wood products. Industrial waste is limited to 30 tons/day.
Water Supply Permits	1. 92-779 2. 87-743	Alabama Department of Environmental Management	1. 10/9/92 2. 9/15/87	1. 10/92 - 9/98 2. 10/87 - 10/97	1. Operate water system consisting of 1 storage tank with a capacity of 1.5 million gallons. There is one unused 1 million gallon concrete storage tank that is in disrepair (Fort McClellan). 2. Operate system consisting of a 5-gpm well with hypochlorinator and 15,000-gallon elevated storage tank (Range 44), this well is not longer in use and ADEM has removed it from permitted status
Wastewater Permits National Pollutant Discharge	1. AL0024520 2. AL0055999	Alabama Department of Environmental Management	1. 9/15/94 2. 7/26/93	1. 10/1/94 - 9/30/99 2. 8/1/93 -	1. Maintained by Operations Technologies, Inc. Covers discharges from FMC wastewater treatment plant. 2. Covers stormwater

Table 4.17 Environmental Permits

Title of Permit	Permit Number	Issuing Agency	Issue Date	Duration	General Conditions
Elimination System (NPDES)	Mod. of AL0055999		Modification Issue Date - 5/6/96	7/31/98 Mod. Effective - 7/1/96	discharges through an oil/water separator at petroleum storage area at Range 24A, storm water runoff from the 11th Chemical Company Motor Pool, DOL Subpool, 209thMilitary Police Motor Pool, Landfill #4, inactive Landfills #1-3, DRMO Yard, Aboveground Storage Tank Farm, DOL Outdoor Storage Yard, Smoke Line Pad Range 24A.
Radiological Permits (U.S. Army Chemical School)	1. 01-02861 2. SNM-1877 3. 01-02861-04	U.S. Nuclear Regulatory Commission	1. 2/12/92 2. 6/4/91 3. 9/7/95	1. 2/12/92 - 2/28/97 2. 6/4/91 - 5/31/96 3. 9/7/95 - 9/30/96	1. For research and development, and for instruction of personnel in the safe use and measurement of ionizing radiation. The following nuclear materials apply: - Any byproduct materials with the atomic number 3-38; in any physical and/or chemical form; not to exceed 100 millicuries per radionuclide and 3 curies total - Cesium 137; sealed sources (3M Model 4F6S); not to exceed 500 millicuries per source and 2 curies total - Cesium 137; sealed sources (UDM-1A); not to exceed 120 curies - Hydrogen 3; in any physical and/or chemical form; not to exceed 1 curie - Americium 241; plated sources; not to exceed 1 microcurie per source and 10 microcuries total - Polonium; plated sources; not to exceed 1 microcurie 2. To be used for instrument calibration and in the training of students. The following nuclear materials apply: - Plutonium 239; Plated alpha sources (Eberline Model S94-1 or AN/UDM-6); not to exceed 12.5 microcuries

Table 4.17 Environmental Permits					
Title of Permit	**Permit Number**	**Issuing Agency**	**Issue Date**	**Duration**	**General Conditions**
					(200 micrograms) - Uranium 233; Plated alpha sources (Oak Ridge National Laboratory custom stainless steel plates); 24 microcuries (25 milligrams)
Note: * Landfill currently closed.					
Source: FWEC, 1996b					

4.11 BIOLOGICAL RESOURCES

This section includes a description of the animal and plant species, including:

- Fish and Wildlife;
- Vegetation and Plant Resources, including a discussion of the Mountain Longleaf Pine (MLP) ecosystem;
- Wetlands;
- Federal Threatened and Endangered Species;
- Other Species of Concern, including a discussion of those areas selected for more intensive ecological management (by FMC) and known as Special Interest Natural Areas (SINAs); and
- Integrated Natural Resources Management Provisions.

Additional information on the biological resources present at FMC, with emphasis on the mountain longleaf pine (*Pinus palustris*) (MLP) ecosystem, can be found in Appendix C.

4.11.1 Fish and Wildlife

FMC has a variety of habitats that support a diversity of natural fauna. These habitats support a diverse array of fauna and flora. The following sections briefly summarize the species that occur at the installation.

4.11.1.1 Mammals. An ecological survey conducted in 1980 identified approximately 35 species of mammals, an estimate that is likely conservative because of the crepuscular and nocturnal nature of many mammals (USAEHA, 1980). Typical species include raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), red fox (*Vulpes vulpes*), grey fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), white-tailed deer (*Odocoileus virginianus*), cottontail rabbit (*Sylvilagus floridanus*), gray squirrel (*Sciurus carolinensis*), fox squirrel (*Sciurus niger*), bobcat (*Lynx rufus*), spotted skunk (*Spirogale putorius*), striped skunk (*Mephitis mephitis*), and several species of mice and rats (Ogden, 1992).

4.11.1.2 Birds. Approximately 200 avian species reside on the installation at least part of the year (USAEHA, 1980). Common species include northern cardinal (*Cardinalis cardinalis*), northern mocking bird (*Mimus polyglottus*), warblers (*Dendroica* spp.), indigo bunting (*Passerina cyanea*), red-eyed vireo (*Vireo olivaceus*), American crow (*Corvus brachyrhynchos*), bluejay (*Cyanocitta cristata*), several species of woodpeckers (*Melanerpes* spp., *Picoides* spp.), and Carolina chickadee (*Parus carolinensis*). Lake, stream and wetland habitats are inhabited by little blue heron (*Egretta caerulea*), belted kingfisher (*Ceryle alcyon*), and numerous waterfowl. Principal game birds include northern bobwhite (*Colinus virginianus*), mourning dove (*Zenaida macroura*), eastern wild turkey (*Meleagris gallopavo*) and wood duck (*Aix sponsa*) (Ogden, 1992).

As part of the Department of Army Legacy Resource Management Program, FMC funded a study of the effects of forest fragmentation on neotropical migratory birds (NTMB) in 1994 and 1995 (Webb, 1996a).

The study found that landscape factors such as fragment size and distance to edge were important factors in determining habitat suitability for neotropical migrants. NTMB species counted during the study that may be more susceptible to fragmentation and other activities that increase forest edge are listed in Table 4.18.

Table 4.18 Neotropical Migrant Bird Species on FMC Susceptible to Fragmentation

Common Name	Scientific Name	Forest Interior	Low Nesting
Acadian Flycatcher	*Empidonax virescens*	·	
Blue-gray Gnatcatcher	*Polioptila caerulea*	·	
Wood Thrush	*Hylocichla mustelina*	·	
Gray Catbird	*Dumetella carolinensis*		·
Red-eyed Vireo	*Vireo olivaceus*	·	
Black-and-white Warbler	*Mniotilta varia*	·	·
Worm-eating Warbler	*Helmintheros vermivorus*	·	·
Ovenbird	*Seiurus aurocapillus*	·	·
Kentucky Warbler	*Oporornis formosus*	·	·
Yellow-breasted Chat	*Icteria virens*		·
Scarlet Tananger	*Piranga olivacea*	·	
Indigo Bunting	*Passerina cyanea*		·
Chipping Sparrow	*Spizella pallida*		·

Source: Webb, 1996; and Finch, 1991

4.11.1.3 Reptiles and Amphibians. The terrain at FMC supports large numbers of amphibians and reptiles. Jacksonville State University has prepared a draft report titled Amphibians and Reptiles of Fort McClellan, Calhoun County, Alabama. The report indicated that surveys in 1997 found 16 species of toads and frogs, 12 species of salamanders, 5 species of lizards, 7 species of turtles, and 17 species of snakes. Typical inhabitants are copperhead (*Agkistrodon contortix*), king snake (*Lampropeltis getulus*), black racer (*Coluber constrictor*), fence lizard (*Sceloporus undulatus*), six-lined racerunner (*Cnemidophorus sexlineatus*), bullfrog (*Rana catesbeiana*), leopard frog (*Rana sphenocephala*), and common snapping turtle (*Chelydra serpentina*). The four-toed salamander (*Hemidactylum scutatum*), which is rare in Alabama (state listed as S3) was found at Reily Lake (Cline and Adams, 1997).

4.11.1.4 Fish. The lakes and streams on FMC provide habitat for many species of fish. Common game species include the largemouth bass (*Micropterus salmoides*), bluegill (*Lepomis machrochirus*), and other sunfish, crappie (*Pomoxis* spp.), and catfish (*Ictalurus* spp.). Nongame fish include the blacknose dace (*Rhinichthys atratulus*), creek chub (*Semotilus atromaculatus*), and stoneroller (*Campostoma anomalum*) (USAEHA, 1980). Primary managed fish species populations include bass (*Micropterus* spp.) and bluegill (*Lepomis macrochrochirus*). As part of a biotic survey of Cane Creek, Weninegar (1993) conducted an electrofishing survey immediately downstream of the FMC boundary on Cane Creek. Species found included largescale stoneroller (*Campostoma oligolepis*), striped shiner (*Luxilus chrysocephalus*), Coosa shiner (*Notropis xaenocephalus*), Alabama hogsucker (*Hypentelium etowanum*), yellow bullhead (*Ictalurus natalis*), green sunfish (*Lepomis cyanellus*), longear sunfish (*Lepomis megalotis*), redeye bass (*Micropterus coosae*), and various darters (*Etheostoma* spp.). The largescale stoneroller and the longear sunfish were the most numerous species in this survey (Weninegar, 1993).

4.11.1.5 Invertebrates and Mussels. Yokely in 1993 (FMC, 1997b) conducted a molluscan survey of Cane Creek from the headwater reaches to the confluence with the Coosa River. Two mussel species were found; *Villosa vanuxemensis umbrans* and *Corbicula fluminea* (asiatic clam). Six gastropod species

were found. The snail population was concentrated in the upper reaches of Cane Creek, especially along and above the golf course area on FMC. *Elimia gerhardti* was the most common snail found.

As part of a biotic survey on Cane Creek, Weninegar also in 1993 (FMC, 1997b) sampled benthic macroinvertebrates at six sites from the headwaters to the mouth of Cane Creek. The benthic data were used to calculate a cumulative quality index based on numbers of taxa present. No quantitative data were collected. Taxa found included water penny, mayflies, sowbugs, caddisflies, stoneflies, blackflies, gilled snails, clams, damselflies, oligochetes, chironomids, pouch snails, tubificids, and two dipteran species. Weninegar concluded that the taxa present indicated poor water quality in the stream, degrading as the creek flows toward the mouth.

C^2 Environmental Services completed a mollusk survey of FMC (FMC, 1997b). This survey found the asiatic clam and seven snail species. *Elimia gerhardti* was the most common snail found. The mid to lower reaches of Cave, Cane, Remount, and South Branch Creek contained the highest numbers of mollusks. Mollusk species often were not found in the upper reaches and headwater seeps of the streams at FMC due to the low pH and low amounts of calcium in the water.

No federal threatened or endangered species were found at FMC during any of the mollusk surveys.

4.11.2 Vegetation and Plant Resources

FMC offers a wide variety of habitats, including highly disturbed areas such as roads and building sites, maintained fields, training areas, as well as various types of forest. Topography ranges from relatively level areas through much of the developed part of FMC to hills and mountainous ridges. FMC is located in the Ridge and Valley Province of the Appalachian Highlands. To the east of FMC is an extension of the Blue Ridge Province represented by the Talladega Mountains. Oak-pine forest dominates this general area. The area is transitional between north central deciduous forests and southern pine forests.

4.11.2.1 Land Cover. FMC land cover, as on most military installations, is divided into three general (non-ecological) categories associated with the level of existing disturbance and land management programs in place (Table 4.19): improved grounds; semi-improved grounds; and unimproved grounds. Improved grounds generally have limited biological resource values because of the high level of disturbance and human activity. Unimproved grounds generally offer the highest biological resource values of the three categories.

Table 4.19 Summary of Land Use and Land Cover Based on Maintenance Activity on FMC

IMPROVED GROUNDS	**ACREAGE**
Buildings, Roads, Lawns and Other Turfed Areas	1,731
Athletic Fields and Parade Grounds	95
Golf Course and Cemeteries	222
Air Field and Heliport	231
SEMI-IMPROVED & UNIMPROVED GROUNDS	**ACREAGE**
Ponds and Lakes [1]	22
Commercial Forest Land [2]	5,985
Noncommercial Forest Land [2 and 3]	10,660

Notes:
1 Maintained in accordance with Wildlife Management Plan
2 Prescribed burning and other management practices conducted in accordance with Forestry and Wildlife Management Plans.
3 Noncommercial Forest Lands contain approximately 1,136 acres that are not forested (semi-improved/developed portions of ranges, roads, road shoulders, trails, firebreaks, etc.).

Table 4.19 Summary of Land Use and Land Cover Based on Maintenance Activity on FMC	
IMPROVED GROUNDS	**ACREAGE**
Source: FWEC, 1996b and FMC, 1991	

An active tree planting program has been in operation for nearly 40 years. Commercial forestry programs throughout the southeast have favored loblolly pine (*Pinus taeda*) due to its ease of establishment and rapid growth. The forestry program at FMC has included the establishment of about 300 acres of loblolly pine at FMC Main Post. The forestry program at FMC has continually modified the commercial forest land cover through harvesting, thinning and strip disking, fertilizing and lime application, prescribed burning, and planting activities.

Forest types on FMC vary according to local topography, soils, and ecological successional stage. Upland forests can be dominated by either hardwoods or pines. Mixtures of these species are typical in the upland communities identified by the Alabama Natural Heritage Program (ANHP). In work done in 1994, ANHP conservatively identified 8 general upland community types occurring on FMC (ANHP, 1994). See Table C.1 for species that typically occur in each of these community types. Soil type and fire history are factors in determining the composition of these forests. Virginia pine (*Pinus virginiana*) is found along ridges, and longleaf pine (*Pinus palustris*) occurs along the south and west slopes of hills and ridges. Short-leaf pine (*Pinus echinata*) is most commonly encountered on more infertile soils. Upland hardwoods are dominated by oak and hickory species. Mountainous hardwoods are dominated by chestnut oak (*Quercus prinus*), scarlet oak (*Q. coccinea*) and pignut hickory (*Carya glabra*). Hardwoods on upland slopes and hills are dominated by southern red oak (*Quercus falcata*), post oak (*Q. stellata*), chestnut oak, black oak (*Q. velutina*), blackjack oak (*Q. marilandica*), pignut hickory, and dogwood (*Cornus florida*). American beech (*Fagus grandifolia*), yellow poplar (*Liriodendron tulipifera*), white ash (*Fraxinus americana*), maple (*Acer* spp.), white oak (*Q. alba*), American holly (*Ilex opaca*) and redbud (*Cercis canadensis*) are present in ravines.

The majority of the areas at FMC are developed or forested, with some oldfields also present. Without continued disturbance, undeveloped areas at FMC quickly revert to forestland. Persistent oldfields at FMC require some type of ongoing activities that either continually or occasionally maintains the land in early successional conditions. Generally oldfields are used for training programs and as ongoing impact areas.

4.11.2.2 Mountain Longleaf Pine (MLP) Ecosystem. Notable stands of longleaf pine (*Pinus palustris*) are found at FMC. Occurrence of this species on ridgetops and south-southwestern slopes of steep ridges are unusual and are referred to as mountain (or montane) longleaf pine (MLP) communities. Regional efforts are being made to restore and maintain remnant populations of longleaf pine (coastal and mountain longleaf pine) throughout the Southeast. These efforts include identifying the best remaining examples of longleaf pine forests, conducting research, and developing strategies for both the preservation of longleaf pine and the economic use of longleaf pine. These regional efforts by various conservation groups, private companies and landowners, universities, and state and federal agencies are being coordinated by the newly formed Longleaf Alliance (Kush, 1996).

The MLP ecosystem once covered ridge and southern slope regions of the Blue Ridge Mountains in northeastern Alabama and northwestern Georgia, but has been reduced to several degraded sites in northeastern Alabama. Slope, aspect, elevation, and fire intensity appear to be significant factors influencing the distribution of MLP in these mountain regions. The forest ecosystem is composed of a mosaic of forest types, with MLP dominating on flat, xeric ridges and moderately steep to steep (30-70 percent) upper, generally south to west facing, slopes.

The forest block at FMC is ecologically important due to its large size and unfragmented condition, diversity and uniqueness of species and communities present, rare species of animals and plants present, and general lack of exotics and disturbance. Decreased logging frequencies and periodic range fires that have allowed the plant communities to be maintained under "natural" conditions add to the ecological

importance of this ecosystem. The main post of FMC, particularly in Area 2 (Figure 3-2), represents the best remaining example of the MLP ecosystem on a landscape scale (Hilton, 1996). Additional discussion on the MLP ecosystem can be found in Appendix C.

4.11.3 Wetlands

Wetland communities on the installation have been characterized and mapped by Gaddy (1984). This survey identified various wetland communities classified as palustrine forested, shrub/scrub, or emergent. Further mapping and evaluations done by the U.S. Army Corps of Engineers (USACE) in 1992 included identification of larger wetland complexes that could be more effectively managed and monitored. Figure 4-16 shows both the National Wetlands Inventory (NWI) classifications and the USACE jurisdictional wetlands limits for FMC. The Corps of Engineers study also provided management and protection recommendations. Subsequent management procedures were designed to remedy existing impacts on these wetlands and focus further management actions on more ecologically important wetlands such as headwater seeps. Not included in the wetland inventories completed to date are a number of seeps (e.g. Marcheta Hill Orchid Seep). FMC is currently identifying and investigating these seeps and has published a draft report entitled “Botanical Study of Upland Seeps on Fort McClellan, Alabama with Special Attention to *Platanthera integrilabia*“. Dataforms were completed for each seep investigated and results indicate that many of the seeps may meet the criteria for jurisdictional wetland status (Whetstone, 1997). More information on seeps at FMC can be found in Appendix C, subsection C.2.4. Wetlands management and inventory activities in use at FMC include the following.

- Locations of larger wetland complexes (U.S. Army Corps of Engineers) have been delineated on installation Environmental Constraints Maps and distributed through Range Control and Directorate of Environment.
- "Vehicles Restricted" signs are placed around wetland complexes that are experiencing impacts from adjacent training or land management activities.

Figure 4-16 Sensitive Habitats, Fort McClellan
11 x 17 (COLOR)

- Written guidance is provided to training units in pamphlets entitled "Protecting Natural Resources in the Field, FMC, Alabama."
- Digitized maps of wetlands are included in the installation's Geographic Information System.
- Briefings on the status of wetlands management are provided to command and organization leaders through quarterly Environmental Quality Control Committee meetings.
- Briefings and printed material are provided through Range Control to new training units.
- Forestry operations adhere to Alabama's Best Management Practices for forestry.

Some of the wetland communities, with their National Wetlands Inventory classification, that Gaddy (1984) identified as occurring at FMC include the following:

- Bottomland Hardwoods - Floodplain hardwood communities occurring on first and second floodplain levels and wetland transitional terraces (palustrine, forested - deciduous; seasonally and temporarily flooded);
- Depressions - Hardwood depressions in upland communities (palustrine, forested - deciduous temporarily flooded);
- Mixed Shrub Communities - Shrub dominated wetlands along stream floodplains, impoundment shorelines, and streamheads (palustrine, scrub/shrub - deciduous temporarily and seasonally flooded);
- Shrub Depression - Depressions in upland communities (palustrine, scrub/shrub - deciduous temporarily and seasonally flooded); and
- Herbaceous Wetlands - Herbaceous vegetation dominated wetland communities along floodplains and in impoundments either man-made or created by beaver (*Castor canadensis*) (palustrine, emergent persistent; temporarily and seasonally flooded).

4.11.4 Federal Threatened and Endangered Species

Two species listed as endangered by the U.S. Department of Interior — Fish and Wildlife Service (USFWS) have been recorded on FMC. One species, the red-cockaded woodpecker, has not been found on the installation since 1968. These endangered species are listed in Table 4.20. At the present time, no species listed by the USFWS as threatened are known to occur at FMC.

Table 4.20 Federally Listed Species

Species	Common Name	Status	Location (SINA)
Myotis grisescens	gray bat	Endangered	Current: Cane Creek Corridor
Picoides borealis	red-cockaded woodpecker	Endangered	Historical: Longleaf pine ecosystem

Source: FMC, 1996d and Appendix A, subsection A-4

4.11.4.1 Current Populations

Gray Bat. The gray bat, the largest member of the genus *Myotis* in the eastern United States, was listed as endangered by the USFWS in 1976. This species exhibits over-water feeding activities, ingesting aquatic night flying insects, along areas where forest cover and canopy extend to the water's edge. A recovery plan with the objective of delisting was prepared and approved in July, 1982. Populations of this species occur in Alabama, Arkansas, Kentucky, Missouri, and Tennessee.

There are no areas on or adjacent to the FMC that have been designated as critical habitat for the gray bat. There are no known caves at FMC Main Post that serve as maternity or winter roosts for the gray bat.

During August 1995, biologists captured two post-lactating female gray bats along Choccolocco Creek in the Choccolocco State Forest (3DI 1996a). The capture site is approximately 2 miles from the eastern boundary of Main Post.

In July 1997, biologists found gray bats roosting in three locations near FMC: 1) The Highway 21 bridge over Cane Creek approximately 100 feet outside Main Post served as a bachelor roost for at least seven adult males during the maternity season, and served as a transient roost for at least 17 gray bats (males and females); 2) On 29 July 1997, biologists discovered adult male, adult female, and juvenile gray bats roosting in Weaver Cave and Lady Cave, both located approximately 1 mile from the northwestern boundary of Main Post; and 3) Two clusters and one solitary gray bat were found in Weaver Cave. Two clusters of gray bats were found in Lady Cave. Additional gray bats may roost in reaches of the caves not investigated. The time of year and mix of ages and sexes in these colonies indicates these bats were transitory. Weaver Cave and Lady Cave had previously been investigated for the presence of gray bats during the maternity season (early July 1997), but no individuals or sign of gray bats were found (3DI, 1997). These cave may serve as roosts for maternity colonies in the future.

Biologists documented gray bats using Fort McClellan during mid- and late-summer (3DI, 1996a, 1996b, and 1997). Reproductive and transient adults have been captured over Cane Creek. Mist net surveys conducted during August 1995 resulted in the capture of 13 gray bats (five post-lactating females, seven adult males, and one of undetermined sex) on Cane Creek within Pelham Range. Mist net surveys conducted in June and July 1996 resulted in the capture of two gray bats (a lactating female and an adult male) on Pelham Range and two adult male gray bats on Main Post along Cane Creek at the golf course. Mist net surveys conducted in June and July 1997 resulted in the capture of one adult male on Cane Creek near the golf course and two post-lactating females on Cane Creek just within the eastern boundary of Pelham Range.

The capture of a reproductive female and three adult males during summer 1996 indicated that at least one maternity colony and one bachelor colony is located within approximately 21.7 miles of the Installation. Radiotelemetry studies conducted in 1997 revealed one bachelor roost under a bridge and two transitional cave roosts outside FMC boundaries; no roosts were found on FMC Main Post.

The August 1995 captures of post reproductive females and adult mates indicate gray bats use the Installation during the transient period following the maternity season. After the maternity season, females and juveniles generally disperse to caves other than the maternity cave. Therefore, several different caves or structures may be used near or on FMC throughout summer and fall. This information is important for determining potential effects of seasonally dependent activities on foraging and roosting gray bats.

FMC and the USFWS have agreed that ESA Section 7 consultation is required for tree clearing within 50 feet of streams designated as high or moderate gray bat foraging habitat.

4.11.4.2 Historical Populations

Red-cockaded Woodpecker. The red-cockaded woodpecker (RCW) was officially listed as endangered by the USFWS in 1970. A recovery plan with the objective of delisting was prepared and approved, by USFWS, in August 1979. A revision to the recovery plan replaced the original and was approved April 1985.

The RCW is endemic to pine forests of the southeastern United States. The species is found in all southern states and southeastern coastal states from Texas into southern Virginia and into the interior of the southeast. The largest populations are in Coastal Plain forests of the Carolinas, Florida, Georgia, Alabama, Mississippi, Louisiana, eastern Texas and in the sandhills of the Carolinas. According to a census done in 1985, the largest number of active clusters were found on National Forests. Large numbers of clusters were also found on DOD lands. The last remaining active RCW cluster on FMC was recorded in 1968. Subsequent surveys in 1972, 1982, and 1985 failed to find birds and the cluster was classified inactive. A more complete description of historical populations and recent surveys on FMC can

be found in Appendix G of the Endangered Species Management Plan. Although the RCW no longer inhabits FMC, active clusters are known to exist in the Talladega National Forest approximately 5 to 7 miles to the east.

The primary reason for the decline in the RCW is often attributed to a decrease in oldgrowth pine that resulted from land clearing and forestry practices. These losses have been greatest in the longleaf-slash pine forest types, which are preferred nesting habitat for the woodpecker. In 1984, the Army formulated guidelines for managing the RCW on military lands. These guidelines involved population goals and inventory requirements. In response to them, the installation modified forest management practices to allow only selective thinning within existing longleaf pine stands. In 1996, the Army revised the guidelines and required more active management practices on installations where the RCW is present or on installations with inactive clusters that the installation in consultation with USFWS continues to manage in an effort to promote reactivation. Because FMC does not contain active or inactive clusters suitable for management, these guidelines are not currently applicable to the installation's resource management program.

Historically, longleaf pine forest on FMC are known to have contained RCWs. The USFWS issued a "no effect" decision on the last inactive cluster in 1986. In 1992, FMC contracted a detailed field survey to identify any possible unknown sites. The survey (FMC, 1996d) failed to find any birds. Historical removal of oldgrowth longleaf pine was credited as the primary reason. FMC however recognizes the Army's responsibility in preserving biodiversity and has taken measures to ensure the future of the longleaf pine community type on the installation. Auburn University, working through the U.S. Forest Service (USFS), will characterize and map existing longleaf communities and develop a management/restoration plan. Because the Talladega National Forest has been selected as a recovery population and active clusters exist approximately 5 to 7 miles east of FMC, it is possible that with restoration of these forests, habitat might be available at some future time.

4.11.5 Other Species of Concern

4.11.5.1 Special Interest Natural Areas

Special Interest Natural Areas (SINAs) on FMC consist of those biological communities that harbor Federal, candidate, or state-listed species, or those habitats containing single or groups of unique or unusual species. While the SINA have no specific legal or regulatory significance, they were classified as such as part of the Integrated Natural Resource Management Plan and the Endangered Species Management Plan (ESMP).

Eleven SINAs have been identified at FMC (Figure 4-16). Some SINAs actually contain a community type (e.g., wetland, stream) along with a buffer to mitigate sedimentation and related disturbances. Within these sites, a "critical element" has been delineated to identify the community of concern. See Appendix C, subsection C.2.1 for additional information. SINAs at FMC include (FMC, 1996d) the following:

- **Mountain Longleaf Pine (MLP) Ecosystem.** This largely unfragmented forest matrix contains the only known example of MLP on a landscape scale. This area also contains other special interest species and areas.

- **Marcheta Hill Orchid Seep.** This is the largest forested seep on the installation. The area is maintained and enhanced by fires resulting from adjacent range activity. This seep contains white fringeless orchid, rose pink, soapwort gentian, Diana butterfly and it is a probable jurisdictional wetland.
- **Bains Gap Seep.** This area contains a collection of small stream seepages that contain Fraser's loosestrife and Carlson’s caddisfly. The area is very susceptible to erosion.

- **South Branch Cane Creek.** Headwaters of this stream contain 17 species of SCC, plus rare and endemic caddisflies. Cane Creek contains the coldwater elimia (*Elimia gerhardti*).

- **Cave Creek Seep.** This seep forms the headwaters of this stream has been noted to contain pink lady's slipper, soapwort gentian, and white fringeless orchid. The area is enhanced by occasional wildfire.

- **Moorman Hill Mountain Juniper.** This area contains the mountain juniper and represents the southern range extension for this species. The area is enhanced by low intensity fires resulting from adjacent range activities.

- **Stanley Hill Chestnut Oak Forest.** This area is the largest tract of mesic woodlands on the installation and as such, it is considered an important area for breeding NTMB. The area is susceptible to wildfire from April to June.

- **Reynolds Hill Turkey Oak.** This area is dominated by mature longleaf pine but also contains a small disjunct population of turkey oak. Fire is critical to maintaining this SINA.

- **Davis Hill Honeysuckle.** The upper slopes of this area contain yellow honeysuckle.

- **Marcheta Hill Crow Poison Seep.** This small headwater seep contains the plant known as crow poison. The area is closely associated with Marcheta Hill Orchid Seep.

- **Frederick Hill Aster Site.** This area contains the only documented population of sky-blue aster in Alabama. Sporadic fires are needed to maintain openings in the canopy so this plant can flourish.

4.11.5.2 Unique or Unusual Species Not Receiving Federal Protection

A number of species have been found on FMC that currently do not receive protection under existing Federal regulations. Federal Species of Concern are listed in Table 4.21. Federal Species of Concern are plants or animals that are being considered for listing (or were formerly listed) as threatened or endangered. The communities associated with these populations are of great interest also. These species can often be indicators for identifying those biotic communities or ecosystems that are regionally uncommon or disappearing. The maintenance and protection of these communities is important in conserving biological diversity and proactively managing for endangered species. Consequently, the occurrences of these species were critical in identifying the Special Interest Natural Areas. State ranked species were also considered when developing SINA. State ranked species represent unusual, rare, or population extensions of more common species. Lists of state ranked species can be found in Tables C.6 and C.7 of Appendix C.

The Army will comply with the requirements of the Endangered Species Act (ESA) if any species being considered or under review for listing are listed or porposed for listing prior to transfer of ownership of the property.

Table 4.21 Federal Species of Concern Recorded on FMC

Scientific Name	Common Name	State Rank	Special Interest Natural Area
Sylvilagus obscurus	Appalachian cottontail	S1	Mountain Longleaf Ecosystem
Elimia gerhardti	Coldwater elimia	S*	Cane Creek Corridor
Speyeria diana	Diana butterfly	S*	Marcheta Hill Orchid Seep
Polycentropus carlsoni	Carlson's caddisfly	S1	Bains Gap Seep and Cave Creek Seep
Platanthera integrilablia	White fringeless orchid	S1	Marcheta Hill Orchid Seep & Cave Creek Seep
Lysimachia fraseri	Fraser's loosestrife	S1	Bains Gap Seep

Crateagus triflora	Three-flowered hawthorn	S2	n/a
Crataegus pearsonii	Pearson's hawthorn	none	n/a
Note: * State ranking is currently under evaluation.			
Source: FMC, 1996d			

Appalachian Cottontail. This species, originally classified with the New England Cottontail, was recently recognized as a distinct taxa. It has been collected from the Talladega Mountains to the west of FMC and was considered a resident on FMC in recent surveys. A specimen collected by ANHP in 1994 was identified as being this species. To further investigate the potential occurrence of this species on FMC, the installation has sponsored surveys at higher elevations forests. Because this rabbit is associated with high elevation forests and rhododendron thickets, conservation measures may be linked to those that benefit other forest interior species in the Mountain Longleaf Ecosystem (FMC, 1996a).

Coldwater Elimia. Surveys by Yokely in 1993 found this snail along most of Cane Creek east of Highway 77, which includes FMC. Recent studies in the Coosa River have found this species to be widely distributed and relatively common. The USFWS has recently recommended that this species be placed in a lower category status since it is more abundant than originally believed. This action removes the species from listing consideration unless future studies show population declines or substantial threats. No specific management prescriptions are considered necessary by the installation to ensure continued survival. Efforts to manage the Cane Creek Corridor SINA, for other species, can be expected to benefit this species.

Diana butterfly. Two females have been observed at the Marcheta Hill Orchid Seep. This butterfly prefers wet, rich forested valleys and mountainsides, and relatively undisturbed forests near streams.

Carlson's caddisfly. FMC contains the only currently known populations of this species in Alabama. This caddisfly has been noted at Bains Gap Seep and South Branch Cane Creek. Seventeen additional species of caddisflies that are considered rare (state rank S1 to S3) in the state of Alabama have been found within these two SINA. Extensive surveys for the Carlson's caddisfly have not been conducted and the potential for additional populations exists.

Fraser's loosestrife. This plant occurs in the mountains of northeast Alabama, north Georgia, Tennessee, and the Carolinas. It is considered uncommon throughout its range. One population has been noted along a headwaters stream in Bains Gap. Further surveys did not locate additional populations.

White Fringeless Orchid. The white fringeless orchid (WFO) was formerly listed as a federal Candidate 2 (C2) species. The WFO is now, as are the majority of the former C2 species, considered a Species of Concern. Preliminary status reviews for this species indicate that the WFO (*Platanthera integrilabia*) may be listed as a federally threatened or endangered species. There have not been extensive or systematic surveys of all the seeps that occur at FMC and is it possible that additional populations of the WFO may be found at FMC.

The plant was first discovered, in detail, on Fort McClellan within the survey: Vascular Flora of Fort McClellan, AL (Whetstone, 1996). This survey located populations of the orchid in training areas 15I, 16C, and 16G. A follow-up survey was conducted from late spring 1997 to October 1997. This survey, Botanic Study of Upland Seeps on Fort McClellan, Alabama with Special Attention to Platanthera integrilabia (ORCHDACEAE) (Whetstone, 1997), found no new populations of WFO.

This bog and seepage plant has been found in two SINAs on FMC: Marcheta Hill Orchid Seep and Cave Creek Seep. The Marcheta Hill Orchid Seep population, which represents one of the largest known populations, is extensive with 252 flowering individuals in 1993 and 213 in 1995. This species was also found in 1992 and 1997 in the Cave Creek Seep. Protection measures have been implemented including

signage and mapping. Management of both these SINAs as part of the Mountain Longleaf Ecosystem will also benefit this species.

Three-flowered hawthorn. The three-flowered hawthorn (*Crateagus triflora*) is an understory shrub that prefers exposed limestone outcrops and an open canopy. Limited surveys for this plant have noted plants at a rock pit area near Range 29 and along a paved road leading into Range 25. This federal Species of Concern is being considered for threatened or endangered listing because the cedar-apple rust is believed to be interfering with production of viable fruits. A SINA for this species has not been designated at this time.

Pearson's hawthorn. During a 1995 floral survey of FMC, collections of field unidentifiable hawthorns were made at FMC. Specimens were provided to regional and national experts on hawthorn identification. A confirmed identification and follow-up surveys of three-flowered hawthorn have been made at FMC (see above). Pearson's hawthorn (*Crataegus pearsonii*) has been preliminarily identified as occurring in training area 15D near the quarry site. This hawthorn was thought to be extinct and has no current federal listing or state designation. If this species is validated to be present at FMC, it may initiate future listing efforts by the USFWS. Botanists considered to be experts in hawthorn identification and representatives from the USFWS and FMC conducted a survey of the quarry area on April 8, 1998. Additional analysis is required before a positive identification of the specimens can be made. The Army and National Guard will protect this site from training and development activities as further studies continue.

4.11.6 Integrated Natural Resources Management Provisions

Management of natural resources at FMC is included in the Integrated Natural Resource Management Plan (INRMP) (FMC, 1991). The INRMP is currently being updated (FMC, 1997c). This plan integrates all natural resource activities (land management, agricultural leases, erosion control, grounds maintenance, landscaping, forestry, fisheries, wildlife, and outdoor recreation). The multipurpose plan manages these resources with the goals of supporting the military training mission through management and maintenance of the land base; sustaining annual harvests of quality forest products; maintaining optimal fish and wildlife populations; enhancing soil and water conservation; preserving or enhancing existing flora and fauna; establishing agricultural outlease programs; ensuring no net loss of wetlands; and coordinating the natural resource management activities with other military land users and ensure their guidance is incorporated.

In 1996, the installation prepared an ESMP which is designed to manage at the community and ecosystem levels for federally listed and state ranked species as well as unusual or sensitive species on the installation. The plan established 11 SINAs, the management of which enhances the continuance of listed, unusual or sensitive species. Management of some of these SINAs was discussed above in subsection 4.11.5 above.

4.11.6.1 Recreational Hunting and Fishing

Hunting. FMC lands are actively hunted by military personnel and civilians. Approximately 10,000 to 12,000 man-days are spent hunting on FMC each year. The total area on FMC providing suitable habitat for wildlife is approximately 16,667 acres. Land available for recreational hunting on FMC totals approximately 16,000 acres (FMC, 1991). Approximately 9,500 of these acres are restricted at least part of the time by range and other military activities. Various furbearers and game birds are managed to enhance hunting opportunities. The white-tailed deer and eastern cottontail rabbit habitat are managed

on-site. Other furbearers recorded in the area include the swamp rabbit (*Sylvilagus aquaticus*), gray squirrel (*Sciurus carolinensis*), eastern fox squirrel (*Sciurus niger*), opossum (*Didelphis virginiana*), beaver (*Castor canadensis*), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), and bobcat (*Felis rufus*). The wild turkey (*Meleagris gallapavo*), northern bobwhite (*Colinus virginianus*), mourning dove (*Zenaida macroura*), and waterfowl populations also benefit from wildlife management programs.

Fishing. Three lakes, totalling 22.5 acres, are managed for military and civilian fishing resources. Management activities include restocking of sportfish, aquatic weed control, and selective poisoning to control undesirable fish. Lake shoreline clearing and deepening of shallow edges have been performed in the Duck Pond. The three warm water impoundments managed for fisheries include the following:

- Reilly Lake (8.5 acres);
- Yahoo Lake (13.5 acres); and
- Duck Pond (0.5 acres).

4.11.6.2 Timber Management. The Forest Management Plan portion of the INRMP provides for the orderly and scientific management of the installation's woodlands, protects the real estate investments of the government; facilitate the military mission; and assure continued production of forest products.

There are approximately 3,800 acres of commercial forest lands on the FMC that do not have access restricted by range or other military activities. A timber inventory was conducted in 1990 and the harvest schedule from 1991 to 1995 was set at 80 percent of annual incremental growth. Annual incremental growth is the amount the forest grows each year. (FMC, 1991).

4.12 CULTURAL RESOURCES

This section describes the cultural resources found at FMC. It presents a brief prehistoric and historical summary and a description of the use of the area as FMC, a description of the archaeological and architectural investigations that have occurred at the installation; and, finally, a description of the cemeteries. Figure 4-17 portrays cultural features at FMC.

4.12.1 Cultural Framework

4.12.1.1 Prehistoric Summary. Investigations from the area surrounding FMC, and the Coosa River Valley specifically, provides more information on the past cultural chronology in the region. The chronology presented below follows the major cultural traditions for the eastern United States.

Paleo-Indian Period (10,000 - 8000 B.C.). The earliest period of human occupation in North America is called the Paleo-Indian Period. Scholarship suggests that hunters pursued herds of Pleistocene megafauna across the Beringia land bridge, and then quickly proceeded to populate the New World. Artifacts diagnostic of this period include finely worked lithic tools such as fluted and non-fluted projectile points, unifacial scrapers, gravers, spokeshaves, and expedient tools. One site, 1CA103, has been recorded at FMC, from which a fluted Paleo-Indian point was recovered (McEachern et. al 1980). The

Figure 4-17 Cultural/Archaeological Resources, Fort McClellan
11 x 17 (B & W)

Paleo-Indian period ended when environmental conditions related to the end of the Pleistocene and beginning of the Holocene stimulated technological and social changes.

Archaic Period (8000 - 1000 B.C.). The Archaic Period is subdivided into Early Archaic (8000 - 5000 B.C.), Middle Archaic (5000 - 3000 B.C.), and Late Archaic (3000 - 1000 B.C.). The extinction of Pleistocene megafauna and change in climate resulted in modifications to subsistence, technology, and settlement. Archaic peoples practiced a cyclical migration which optimized the exploitation of seasonally available resources. Hunting and gathering subsistence and small scale egalitarian social systems were typical of the period. Stemmed and corner-notched projectile points were common in the Archaic period, and ceramic vessels were developed near the end of this period. Late Archaic components at FMC have been identified at seven sites.

Woodland Period (1000 B.C. - A.D. 900). The Woodland Period is characterized by increased, although not fully developed, sedentism and evidence of horticulture as a supplement to hunter/gatherer subsistence techniques. Ceramic vessels and storage features were integral parts of this seasonally sedentary lifestyle. Greater variation can be observed in projectile point types. Woodland peoples often built earthen mounds for ceremonial purposes including burial interment. Twenty-one Woodland sites have been recorded at FMC, including eighteen stone features and one earthen mound.

Mississippian Period (A.D. 900 - 1540). The Mississippian Period, which spanned from the end of the Woodland Period until European contact, represents the apex of aboriginal socio-political development in the southeastern United States. The Mississippian Period is characterized by defined political boundaries controlled by a hierarchical polity reliant upon maize agriculture. Mississippian settlement patterning typically consisted of a large, central village containing one or more mounds surrounded by smaller hamlets which supposedly provided maize in the form of tribute to the central village. Mississippian sites often are found on floodplains of large drainages where there would be fertile soils. European-borne disease and violence sped the decline of the Mississippian social system after European contact in the mid-sixteenth century. Two sites on FMC have yielded artifacts diagnostic of the Mississippian Period, these sites are relatively small manifestations and do not represent major villages or hamlets.

Protohistoric Period (A.D. 1540 - 1700). The period of initial contact between Europeans and Native Americans is referred to as the Protohistoric Period. When Hernando DeSoto's expedition traversed the state of Alabama in 1540, it was part of the Coosa Polity. The travel accounts from this expedition described this territory as populous and fertile. When Tristan de Luna returned 16 years later, he described the region as having far fewer inhabitants than had been described by DeSoto. European contact caused the demise of the Mississippian culture and the loss of countless Native American lives. By the seventeenth century, mound building had ceased and native arts and industries were being affected, and in some cases, replaced by European trade goods and raw materials. European contact was a stimulus for the termination of the Native American lifestyle. Descendants of the Coosa, called the Creek Indians, would come to occupy the FMC region.

Historic Period (Post-1700). During the historic period, the area was inhabited by the Creeks. The Creek Confederation was a political alliance binding disparate groups in response to the end to the Mississippian structure and to encroachment by European settlers. Although no towns or occupations are known at FMC, present day Cane Creek was the location of at least one Creek village, and the fort is on what was Creek land. Practically all of the Creek either had voluntarily moved or been forcibly removed by the middle of the nineteenth century.

When the Creeks were removed in the nineteenth century, northeastern Alabama attracted many new settlers because of the availability of natural resources. Agriculturists were attracted to the rich soil of the floodplains and on the level ridges and terraces. In the 1860s, industrialists were attracted to the region by the availability of natural coal and iron rich hematite that supplied the early iron industry. In 1860, the population of Calhoun County was 25,881, which included 4,342 slaves. At that time, approximately 90 percent of the population was involved in agriculture (McEachern and Boice 1976).

4.12.1.2 Establishment of FMC. The significant military use of the region began when Camp Shipp was built near Anniston, Alabama, in 1898. In 1917, this post was expanded and renamed Camp McClellan after the well-known Union Civil War Commander. A 1929 War Department Order changed Camp McClellan to Fort McClellan. In 1941, the Pelham Range area of the post was added to facilitate the expanded training role in which FMC was involved. Currently, FMC is an active U.S. Army facility dedicated primarily to the training of military personnel.

In the quest for an ideal site for test firing artillery shells, the Army received reports from the Fourth Alabama Artillery Unit in the late nineteenth century of a potential firing range in Calhoun County, Alabama, identified as the Choccolocco Mountains. In 1912, the Federal Government's interest in the area began to grow following the successful training of National Guardsmen at the site. The Government proceeded to purchase the 18,950-acre (7,580-hectare) facility in 1917 for use as an artillery range.

Shortly after the Army's possession of the site, the United States declared war on Germany. The War Department decided to utilize "Camp McClellan" for Army mobilization training. By the end of the war, a total of 1,551 buildings had been built. The camp earned its official title, Fort McClellan, and became a permanent post in July 1929.

FMC hosted several regiments, including an anti-aircraft artillery and a tank company, prior to the second world war. During World War II, FMC was utilized in two crucial ways: (1) as a training center for some 50,000 soldiers and (2) as a prisoner of war camp. The post-war function of the fort underwent a transition from an occupational duty training center for soldiers to a basic training center for new recruits.

In 1947, FMC was inactivated; however, due to the outdoor training resources available and the diversity of topography conducive to all types of chemical field training, the fort was reactivated in 1950. It became the home of the Army's Chemical Corps School from 1951-1973 and was then re-established in 1979. The Women's Army Corps (WAC) was present at McClellan from the early 1950s until 1977. The U.S. Army Military Police School relocated from Fort Gordon, Georgia, to FMC in 1975. Both the U.S. Army Chemical School and the U.S. Army Military Police School remain at FMC today, in addition to training organizations, the Department of Defense Polygraph Institute, and the Chemical Defense Training Facility (CDTF) are located at FMC.

4.12.2 Cultural Resources Management and Section 106 Compliance

4.12.2.1 Archaeological Surveys. All the FMC excess acreage proposed for disposal was examined for archeological resources by six different surveys. These include some studies that have also covered parts of the Choccolocco Corridor and Pelham Range which are not included in the excess property. Survey work by the University of Alabama, Birmingham in 1976 and 1977 covered approximately 4500 acres of the excess property. The results of this work have been submitted to the Alabama State Historic Preservation Officer who provided concurrence with recommendations of those studies. The draft reports for the remainder of the archeological survey work in the excess property are now being examined by the Army and will shortly be submitted to the Alabama State Historic Preservation Officer for review.

Based on SHPO recommendations, site evaluations are expected to occur on a maximum of 13 sites expected to be transferred from federal control in the excess area using Phase II criteria. The evaluations will determine if the sites are eligible for the National Register. This work is expected to begin in summer,1998 and was not completed in time for the FEIS. If additional studies are required, they will be conducted following the completion of these studies.

Archaeological investigations completed at FMC, which have covered the excess property (See Figure 4-18), include the following:

- **University of Alabama, Phase I Survey - 1976** (McEachern and Boice 1976). The first cultural resources survey at FMC was undertaken in 1976 by the University of Alabama in Birmingham. The pedestrian reconnaissance included coverage of approximately 250 acres of land that is now within the excess property. The SHPO has reviewed and concurred with the report recommendations.

- **University of Alabama, Phase I Survey - 1977** (McEachern et al 1980). This pedestrian reconnaissance provided survey coverage of approximately 4300 acres of land that is now within the excess property. The SHPO has reviewed and concurred with the report recommendations.

- **Jacksonville State University, Phase I Survey - 1988** (Holstein 1988). This was a pedestrian survey with shovel testing of high probability portions of a project area (acreage unknown) of land that is now within the excess property.

- **Jacksonville State University, Phase I Survey - 1991 to present**. This pedestrian survey with shovel testing covered approximately 7400 acres of land that is now within the excess property. SHPO has reviewed the draft report and JSU will complete the Final Phase I report addressing SHPO comments.

- **Auburn University, Phase I Survey - 1993** (Cottier et al 1993). This was a pedestrian survey with shovel testing of a proposed highway corridor, a portion of which lies within FMC. This was a linear, rather than area survey, acreage unknown. Review status of this study, which was not conducted by the Army, is not known.

- **Garrow and Associates, Phase I Survey - 1997** (draft report currently under review by the SHPO). This was a pedestrian survey with shovel testing of all areas in excess property not previously surveyed. Approximately 6800 acres, the balance of the previously unsurveyed land in the excess property, was surveyed in this investigation.

The results of early cultural resource studies conducted at FMC (McEachern and Boice 1976; McEachern et al 1980) were submitted to the Alabama State Historic Preservation Officer in a letter dated January 22, 1992 in which FMC's Environmental Management Division proposed to consider and protect sites identified by these surveys, and another that covered property that is not within the excess property. The SHPO responded in a letter dated February 7, 1992 indicating concurrence with the report findings.

Ground disturbing activities in areas surveyed, but for which survey reports have not been submitted to the SHPO and/or concurred will be evaluated for consultation, under standard Section 106 review procedures, or under the Programmatic Agreement.

Artifact and human skeletal remains collected at FMC are curated in compliance with the *Curation of Federally-Owned and Administered Archaeological Collections (36CFR79)* and *The Native American Graves Protection and Repatriation Act of 1990.* This legislation requires FMC to inventory their collections and provide for their proper curation and access for study. Disposition of materials collected during cultural resource surveys at FMC is shown in Table 4.22. In January 1995, notice of the possession, location and disposition of this material was provided to the 12 tribes with historical ties to this area. Since that time, three tribes have responded. The artifacts recovered during the recent Garrow & Associates survey will be returned to FMC by that firm following submission of the final report.

Figure 4-18 Archaeological Studies
8 1/2 X 11 B & W

Table 4.22 Disposition of Native American Cultural & Historic Artifacts, Fort McClellan		
Survey Information	**Volume of Material (feet^3)**	**Location of Curated Materials**
Various surveys	<1.0	FMC
1971 survey of Site 1Ca42	0.4	Jacksonville State University
1971 survey of Site 1Ca42	6.2 (incl. 3.2 ft of Nat. Amer. artifacts)	Anniston Museum/Museum of Nat. Hist.
1976-1977 Univ. of Alabama Birmingham	4.2	Jacksonville State University
1985 survey of Site 1Ca32	0.75	Jacksonville State University
1985-1987 survey of Site 1Ca42	53.7 (incl. 3.7 ft of Nat. Amer. artifacts)	Jacksonville State University
1991-present survey	2.2	Jacksonville State University
1992 testing of Site 1Ca62 and 1Ca507	1.5	Jacksonville State University
1993 Survey	<1	Auburn University
1997 Garrow & Assoc., Phase I Survey	1	FMC
Source: FMC, August 1996		

4.12.2.2 Historic Buildings and Structures Surveys. Three historic architectural studies have been conducted for FMC. The Army is currently conducting a review of permanent World War II and Cold War era buildings and structures to determine whether any should be recommended as being eligible for the National Register of Historic Properties (NRHP).

The Military Showplace of the South, Fort McClellan, Alabama (Reed et al. 1993). The history and historic architecture of FMC is described and assessed in this work, which includes a description of the two FMC areas recommended as being eligible for the NRHP as districts. The proposed National Register districts were referred to as the Industrial District and the Main Administrative area known as "The Hill". Since that work, the Main Administrative District has been renamed the Headquarters District and another district has been proposed, to include the Magazine Area (Munitions Storage).

Inventory and Evaluation of Seventeen Buildings, Fort McClellan, Alabama (Reed et. al 1994). This report concluded that the Magazine Area constituted a third historic district, which is now called the Ammunition Storage district. Seventeen buildings omitted from earlier historic structures surveys because access was restricted, were inventoried and evaluated in this report. These buildings included one building in the Industrial District, and sixteen buildings in the Magazine Area. Five of the buildings cited in the report were subsequently demolished following HABS/HAER Level I standard architectural documentation. The current historic districts at FMC are shown on Figure 4-17.

Fort McClellan Historic Preservation Plan (Joseph et. al 1996). A comprehensive historic preservation plan was prepared for the management of cultural resources at FMC. This plan provides a brief overview of the prehistory and history of the FMC region, an inventory of the potentially NRHP eligible archaeological sites and historic architectural resources, and recommends treatment for identified resources and standards for documentation. This plan cited a total of 96 buildings as potentially NRHP eligible, including 62 buildings in the Headquarters District; 17 buildings in the Industrial District; and 8 buildings in the Ammunition Storage Area.

Summary. Based on consultation with the Alabama SHPO, there are presently three National Register eligible historic districts at Fort McClellan.

1. The Post Headquarters District includes 62 contributing structures.
2. The Industrial District includes 17 contributing structures.
3. The Ammunition Storage District includes 8 contributing structures.

In addition, Building 129, which lies between the Post Headquarters District and the Industrial District is regarded as eligible to the National Register. Thus, there are 87 structures that contribute to three historic districts, and a single building which is regarded as Register Eligible, but not within a historic district, for a total of 88 register eligible structures.

4.12.2.3 Cemeteries. FMC has a total of 4 cemeteries, identified on historic maps, photographs, property plats, Post acquisition records, and other archival sources (Joseph et. al 1996:105). Cemeteries are not considered historic properties, and are thus not subject to Section 106 compliance. However, for purposes of identification, these cemeteries include one Post cemetery (considered both a military cemetery and a historic church cemetery), one POW military cemetery, the Antioch cemetery (a civilian church cemetery), and one unnamed civilian cemetery on the west side of the post. The Post and POW cemeteries are within the FMC parcels being retained by the Army. Deed provisions allowing access to the two civilian cemeteries may be applicable.

4.13 SOCIOLOGICAL ENVIRONMENT

Elements of the sociological environment discussed in this section include the demographics of FMC and its surrounding environs; visual and aesthetic values; Native American and other ethnic groups; homeless programs; public safety and fire protection; and environmental justice.

4.13.1 Demographics

4.13.1.1 Fort McClellan Population. FMC's average daytime population for FY95 was 9,024 (Table 4.23). The on-post daytime population was comprised of an average of 5,326 military personnel; 1,459 military family members; and 2,239 civilians. Total on-post military resident population in FY95 totaled 5,351 (FMC, 1995c). Approximately 1,434 active military personnel and 2,100 military family members live off-post. In addition, over 5,000 military retirees live within the surrounding eight-county area, with 60 percent of those residing in Calhoun County.

4.13.1.2 Regional Population. The area considered as FMC's region of socioeconomic influence (ROI), as defined by the Economic Impact Forecast System (EIFS) (USACERL, 1984), consists of the surrounding eight-county region with Calhoun County realizing the greatest social and economic impacts from the installation. Calhoun County constitutes the Anniston Metropolitan Statistical Area (MSA). In addition to Calhoun County, other counties within the ROI include Cherokee, Clay, Cleburne, Etowah, Randolph, St. Clair and Talladega. The ROI in reality consists of a primary and secondary sphere of economic influence from FMC operations. Based upon current residency of military and civilian personnel associated with the installation in addition to other factors, including commuting distance and location of major shopping facilities, the primary ROI includes Calhoun, Cleburne, Etowah, and Talladega counties. According to zip code residency data, over 95 percent of the civilian and military personnel reside in Calhoun County (FMC, 1995c). In addition, the area's major shopping facilities are located in Calhoun (Addison, Oxford) and Etowah (Gadsden) counties. The presence of recreational facilities and military retirees are the major reasons for the inclusion of Cherokee, Clay, Randolph and St. Clair counties as the secondary area in the overall ROI. Both the primary and secondary ROI's receive direct and indirect benefits from FMC operations, including purchase of goods and services; purchase\rental of housing; and employment generation.

Over 70 percent of the ROI population is located in Calhoun, Etowah and Talladega counties. Gadsden (42,523) in Etowah County, Talladega (18,175) in Talladega County, and Anniston (26,623), Jacksonville (10,283) and Oxford (9,362) in Calhoun County are the largest cities within the ROI (Census, 1990). Approximately 54 percent of the ROI population is classified as urban compared to 60.4 percent for the state of Alabama. Calhoun and Etowah counties are the most urbanized with over 70 percent of the

population classified as urban, while over 70 percent of the population is classified as rural in Cherokee, Clay, Cleburne and St. Clair counties.

Table 4.23 Fort McClellan Population

Classification	FY95
Average Daytime On-Post Population	
Military	
Permanent Party Military (includes both on-and-off-post residency)	2,166
Trainees\Students	3,160
Civilian	
DOD Civilian Employees	1,077
Other Civilian Employees	1,162
Military Family Members	1,459
Average Daytime Population	**9,024**
Total Resident Population	**5,351**
Off-Post Population	
Military Personnel, Permanent Party (off-post residency)	1,434
Military Family Members	2,100
Total Off-Post Population	**3,534**
Total Population	**11,124**

Source: Fort McClellan, Directorate of Resource Management.

As indicated in Table 4.24, the ROI increased in population by only one percent from 1980 to 1990 compared to a statewide increase of four percent during the same time period. Four counties within the ROI declined in population during this period with Calhoun and Etowah counties having both the largest absolute and relative decreases in population. The three largest cities in the ROI also decreased in population between 1980 and 1990. St. Clair County, which includes eastern suburbs of Birmingham, increased in population by over 20 percent during this period, with Cherokee and Cleburne counties registering very modest population growth. According to the U.S. Census, the majority of the population decrease was due to out-migration as this component of population change exceeded the natural increase in four (Calhoun, Clay, Etowah and Randolph) of the eight counties in the ROI. Only Cherokee and St. Clair counties had a net in-migration of population during this period. Overall, the ROI had a net out-migration of 15,101 people during the 1980-90 period (Census, 1990). Factors accounting for this out-migration include the loss of jobs associated with the textile industry which was accelerated by the recession during the 1980s; lack of employment opportunities for the younger population; and downsizing at FMC and the U.S. Army Depot. In addition, apparent under-counting occurred in Calhoun and Etowah during the 1990 census which resulted in lower 1990 population counts.

Table 4.24 Fort McClellan Regional Population Trends, 1980-2000

County	1980 Population	1990 Population	Percent Change	1995 Estimated Population	2000 Projected Population	2010 Projected Population
Calhoun	119,761	116,032	-.03	117,263	130,406	146,715
Cherokee	18,760	19,543	+.04	21,038	21,432	23,210
Clay	13,703	13,252	-.03	13,551	13,549	13,985

Cleburne	12,595	12,730	+.01	13,272	13,416	14,455
Etowah	103,057	99,840	-.03	100,259	109,930	122,167
Randolph	20,075	19,881	-.01	20,323	20,204	20,682
St. Clair	41,205	49,811	+.21	57,713	58,012	64,989
Talladega	73,826	74,109	+.01	76,737	82,221	90,312
Total	**402,982**	**405,198**	**+.01**	**420,156**	**449,170**	**496,515**
Anniston	29,135	26,623	-8.6	27,115[1]	na	na
Oxford	8,939	9,362	+4.7	9,760[1]	na	na
Alabama	3,893,888	4,040,389	+.04	4,113,525	4,181,866	4,291,103

Note: 1 1992 population estimates.

Source: U.S. Census of Population (Census, 1980, 1990); and Alabama State Data Center, CBER.

The age structure of the regional population generally mirrors that of the state of Alabama with the median age of the ROI being 34.1 years, with Calhoun county having the lowest (32.7 years) and Cherokee county the highest (36.3 years) median age. Approximately 52 percent of the ROI population is female and 48 percent male. Population estimates for 1995 indicate a more stable and increasing population within the ROI since 1990, with all seven counties experiencing positive growth.

Population projections for the years 2000 and 2010 reflect the continuing dominance of Calhoun, Etowah and Talladega counties with almost three-fourths of the ROI's population located within these three counties. The population projections indicate a much greater population increase (18 percent) between 1995 and 2010 than for the state of Alabama (4 percent) during the same period (ASDC, 1996). However, these projections were completed prior to the decision to close FMC which will affect the resident, employee and military retiree populations of the region.

4.13.2 Visual And Aesthetic Values

The visual and aesthetic values at FMC include aspects of both the natural and man-made environment. FMC offers a varied and picturesque topographic setting characterized by gently to steeply rolling terrain with elevations ranging from 700 feet in the cantonment area to over 2,000 feet above sea level at the peak of the Choccolocco Mountain range which surrounds the cantonment area to the east and south. A wide variety of vegetation types provide diverse landscape settings as over 11,000 acres of FMC are forests that include oaks, hickories, beech, sweet gum, dogwood, maple, pines and a variety of other trees. Complementing this natural setting are large open space areas, including a golf course, parade ground and numerous recreational areas. Associated with the above is a natural aquatic environment which consists of two lakes and two ponds and more than 11 miles of spring-fed streams.

The most distinctive and appealing man-made feature on FMC is the Buckner Circle/Post Headquarters area which was constructed by the Works Progress Administration (WPA) in the 1930s. Buckner Circle, a family housing area for officers, represents a unique architectural and aesthetic environment with its Spanish Colonial Revival-style architecture and associated attractive open space areas. The adjacent Post Headquarters and associated administrative buildings exhibit similar architectural style and open space amenities.

4.13.3 Native American and Other Ethnic Concerns

Less than one percent of the population within the ROI is identified as Native American, Asian/Pacific Islander, or other race according to the 1990 U.S. Census (Census, 1990). These ethnic groups combined make up over one percent (1.28 percent) of the population in only one county (Calhoun) in the ROI.

Disposition of materials collected during historic resource surveys on FMC was discussed in subsection 4.12.2.1 above. Information on the curation and disposition of Native American cultural and historic artifacts collected from FMC was provided in that section. Notice of the possession, location and disposition of this material was provided in January 1995 to the 12 tribes with historical ties to this area (Rice, pers. comm., 1996). At present, three tribes have expressed interest in more information on the material.

4.13.4 Environmental Justice

On February 11, 1994, President Clinton issued Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (FR, 1994) (See Appendix E for copy of Executive Order). The purpose of this executive order is to avoid the disproportionate placement of adverse environmental, economic, social, or health impacts from Federal actions and policies on minority and low-income populations or communities. An element emanating from this order was the creation of an Interagency Federal Working Group (IFWG) on Environmental Justice comprised of the heads of seventeen Federal departments and agencies, including the Department of Army. Each department or agency is to develop a strategy and implementation plan for addressing environmental justice.

On April 21, 1997, the president issued Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (FR, 1997) (See Appendix E for copy of Executive Order). This Executive Order recognizes that a growing body of scientific knowledge demonstrates that children may suffer disproportionately from environmental health risks and safety risks. These risks arise because children's bodily systems are not fully developed; because they eat, drink, and breathe more in proportion to their body weight; because their size and weight can diminish protection from standard safety features; and because their behavior patterns can make them more susceptible to accidents. Based on these factors, the President directed each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that might disproportionately affect children. The President also directed each federal agency to ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

It is the Army's policy to fully comply with Executive Order 12898 and Executive Order 13045 by incorporating environmental justice concerns in decision-making processes supporting Army policies, programs, projects, and activities. In this regard, the Army ensures that it will identify, disclose, and respond to potential adverse social and environmental impacts on children, and minority and/or low-income populations within the area affected by a proposed Army action.

For environmental justice considerations, these populations are defined as individuals or groups of individuals which are subject to an actual or potential health, economic, or environmental threat arising from existing or proposed Federal actions and policies. *"Low income"* is defined as the aggregate annual mean income for a family of four in 1989 correlating to $12,674.

Low-income and minority population data was compared for Calhoun County, the eight county ROI, and the State of Alabama. This comparative analysis is summarized in Table 4.25. The percent of the minority population in the FMC ROI (18.5 percent) is lower than that for the State of Alabama (26.4 percent) as is the percent of low income population. Talladega County had the highest percent minority population (31.3 percent) and also the highest percent of low-income persons (20.1 percent), while Cherokee and Cleburne counties had the lowest percent minority population. St. Clair, Cleburne and Calhoun counties had the lowest percent of low income population.

Table 4.25 Minority and Low-Income Populations: Fort McClellan Environs. 1990

County	Total Population	Percent Non-White Population	Median Household Income	Percent Persons Below Poverty Level [1] (Includes Poor/Very	Percent Persons Below 50% of Poverty Level (Very Poor Only)

				Poor)	
Fort McClellan Region of Influence (ROI)					
Calhoun[2]	116,034	19.9	23,802	15.7	6.5
Cherokee	19,543	6.9	21,368	17.6	5.8
Clay	13,252	16.7	19,252	17.4	5.1
Cleburne	12,730	5.2	21,158	15.3	5.7
Etowah	99,840	14.9	22,314	16.5	6.0
Randolph	19,840	23.9	19,448	18.9	6.9
St. Clair	50,009	9.6	24,106	14.8	5.4
Talladega	74,107	31.3	21,378	20.1	8.8
Total/Avg. (ROI)	**405,355**	**18.5**	**22,340**	**16.9**	**6.6**
Anniston, Ala.	26,623	45.7	19,099	24.4	10.4
State of Alabama	4,040,587	26.4	23,597	18.3	8.0

Notes: 1 The poverty threshold for a family of four persons was $12,674 in 1989 as used in the 1990 U.S. Census.
2 Includes Fort McClellan.

Source: 1990 U.S. Census of Population.

4.13.5 Homeless Programs

Several organizations, such as the Salvation Army, Meals-on-Wheels, Children's Services Inc., and Goodwill, offer practical assistance such as child care, shelter, rent/mortgage and utilities funding, home weatherization, clothing, food, work rehabilitation/job training, and medical services to families and individuals who are homeless, unemployed, handicapped, homebound, or financially disadvantaged. The Community Enabler and the American Red Cross specialize in providing food, clothing, shelter, medical attention, and communication in disaster and emergency situations. The American Red Cross also provides volunteer and blood services and safety training.

4.13.6 Other Special Programs

FMC provides social service programs that aid members of the military and their families. The majority of these services are provided by the Army Community Service. The American Red Cross on FMC also serves military families. Services provided by the Red Cross include family counseling and adjustment services, emergency communication, health and welfare inquires, supportive health services, and emergency financial assistance.

Calhoun County has an abundance of social service organizations which serve to meet specialized needs within the community. The Calhoun County Health Department provides medical services and counseling such as childrens' checkups, immunizations, maternity care, family planning, sexually transmitted disease treatment, and Medicare/Medicaid screening. The Health Department also performs inspections of restaurant and septic and sewage systems. In addition to caring for the mentally ill and retarded, the Calhoun County Mental Health Center has many capabilities such as child counseling, group homes, drug and alcohol abuse treatment and rehabilitation, and work programs for the handicapped. Other agencies which work with the physically and mentally handicapped include St. Michael's Community Service Center and the Association for Retarded Children.
While some funding for these services is provided by the Federal Government and the State, a great deal of support, financial and material, is provided from charitable donations from individuals and organizations. The United Way of Calhoun County serves as a distributor to designate funding to the appropriate social service organizations. The Calhoun County Human Resources Department coordinates child welfare and

food stamp programs, and also distributes welfare payments, and provides job training and placement to those with special needs.

4.13.7 Community Services

4.13.7.1 Police Protection

On-Post. Fort McClellan is under exclusive federal jurisdiction with law enforcement and security on FMC provided by the Law Enforcement Division under the Directorate of Community Safety from Building 63, and supplemented with personnel from the 209th Military Police Company and Fort McClellan Military Police Company. There are 25 personnel with 12 patrol vehicles in the Law Enforcement Division, and approximately 200 personnel available from the above Military Police companies. Approximately 50 personnel are on law enforcement patrol duty any given day. The military law enforcement authorities cooperate with local police departments on mutual off-post check-point activities, and coordinate their off-post activities with local law enforcement authorities on a case-by-case basis.

Off-Post. Police protection is provided in surrounding cities by city police departments and in rural areas by county sheriff departments. The Anniston City Police Department has 90 police officers, six dispatchers, and 27 patrol vehicles. The ratio of sworn law enforcement officers to residents of Calhoun County is approximately 1.7:1,000, as reported in *Crime in Alabama* by the State of Alabama Criminal Justice Information Center (1992).

4.13.7.2 Fire Protection

On-Post. Fire protection on FMC is provided from one fire station operated under the Directorate of Community Safety in Building 69. The fire department's equipment includes one 1,250 gpm pumper; two 1,000 gpm pumpers; one 250 gpm pumper; one rescue truck; one brush truck; and one hazardous spill response trailer. In 1992, 20 of the 22 firemen had been trained to the Hazardous Materials Technician level. Written mutual aid agreements exist between the FMC Fire Department and the Anniston City Fire Department, the Jacksonville City Fire Department, and the Anniston Army Depot Fire Department to provide assistance in the case of an emergency.

Off-Post. Fire protection for the area surrounding FMC is provided by the city fire departments located throughout Anniston, Piedmont, Jacksonville, and Oxford; and volunteer fire departments located in Alexandria, Coldwater, Eastaboga, Quad City, Ohatchee, and Weaver. All of these fire departments are on 24-hour call. The Anniston City Fire Department operates five stations within the city; one of which is located adjacent to FMC on Highway 21. The Oxford City Fire Department operates three fire stations, and the cities of Jacksonville and Piedmont each have one fire station.

4.13.7.3 Emergency Services. Noble Army Community Hospital Emergency Medical Service (EMS) serves residents of FMC. Calhoun County has a network of first response personnel trained in vital, emergency care. Every municipality within the county has access to emergency rescue services. The Jacksonville Fire Department, Oxford EMS, and Lincoln EMS offer ambulance service 24 hours a day. In addition, the entire county is serviced by enhanced 911 service.

4.14 ECONOMIC DEVELOPMENT

4.14.1 Regional Economic Activity

Calhoun County is the nucleus of the eight-county ROI and the primary beneficiary of the economic influence of FMC. The City of Anniston, located adjacent to FMC, is the economic hub of Calhoun County and, along with its sister city of Oxford, a primary growth center in the ROI. Other growth centers include Gadsden in Etowah County; Jacksonville, home of Jacksonville State University in Calhoun County; and Talladega in Talladega County (EARPDC, 1996b).

The regional non-agricultural civilian labor force totaled 195,263 in 1994, a 12 percent increase from 1985, and approximately equivalent to the state-wide increase percent during the same time period. Etowah and St. Clair counties had the greatest absolute increases in the civilian labor force during this period. The average annual regional unemployment rate was 6.5 percent in 1994, with Calhoun and Talladega counties having the highest unemployment rate (7.6 percent) and St. Clair County the lowest unemployment rate (3.9 percent) (USDL, 1995). The state-wide unemployment rate for the same time period was approximately 6 percent. The median household income for the ROI was $22,340 in 1990, ranging from a high of $24,106 in St. Clair County to a low of $19,252 in Clay County. Calhoun County's median household income was $23,802, or slightly higher than the state-wide median household income of $23,597 (Census, 1990).

Total non-agricultural employment in the ROI in 1994 was 174,634, an approximate 12 percent increase since 1985 as compared to a state-wide 21 percent increase during the same time period. Approximately one-half of the absolute increase (20,450) occurred in Etowah and St. Clair counties, with St. Clair County having the greatest relative increase (32 percent) of all the counties in the ROI (USDC, 1995, 1986). Employment growth in Calhoun County was a modest four percent during this period, primarily due to significant reductions in federal/civilian and military employment at FMC and the Anniston Army Depot. This reduction in government and military employment, however, was more than off-set by employment increases in the manufacturing, retail trade and services industries.

Four of the five largest employers in Calhoun County are public organizations - FMC, Anniston Army Depot, Northeast Alabama Regional Medical Center, and Jacksonville State University. The largest private employers are manufacturing industries, with textiles and apparel manufacturing, and primary and fabricated metal products comprising almost three-fourths of the manufacturing jobs in Calhoun County (USDC, 1995). The county's employment and industrial base has become more balanced and diversified as the dependence on federal/civilian and military employment has diminished. Although Calhoun County contains one-fourth of the ROI labor force, 35 percent of the non-farm ROI employment is located within the county (USDC, 1995). In addition, Calhoun County lost population between 1980 and 1990. This implies that Calhoun County's employment base consists of portions of the labor force commuting from the surrounding counties.

During the last ten years the eight-county region, shown in Figure 4-19, has experienced economic changes that have been reflected in the region's employment pattern. Table 4.26 portrays the distribution of employment by industry sectors for 1994. Changes and growth trends in specific employment sectors have been consistent with national trends as exemplified by the regional decline in farm and agricultural-related employment, and corresponding increases in the retail trade and services industries.

Figure 4-19 Region of Influence
8 x 11 (B & W)

The non-farm sector consists of two primary employment sectors - private and government. The private sector has experienced a larger growth rate during the 1985-1994 period than the government sector, with the retail and services industries experiencing the highest growth rates. For example, within the eight-county ROI employment within retail trade and services increased to 36.7 percent of total non-agricultural employment in 1994 versus 30.6 percent in 1985 The manufacturing industry, while still remaining the largest individual employment industry in the private sector, experienced a decrease in relative importance over the 10-year period with employment decreasing from 24.6 percent of total regional employment in 1985 to 22.6 percent 1994 (USDC, 1995, 1986). This decrease in the relative importance of manufacturing in comparison to the services and retail industries is consistent with national trends.

Table 4.26 Employment Distribution by Standard Identification Code, 1994: Fort McClellan Environs[1] (Employment by Place of Work)

SIC Code	Industry	Calhoun County		Region of Influence[2]		State of Alabama
		Employment	Percent	Employment	Percent	Percent
7	Agricultural. Services, Forestry, Fishing	542	0.9	1,414	0.8	1.0
10	Mining	104	0.2	591	0.3	0.6
15	Contract Construction	2,550	4.2	9,228	5.1	5.5
19	Manufacturing	11,583	18.9	40,951	22.6	18.4
40	Transportation/Other Public Utilities	2,302	3.8	7,157	4.0	4.7
50	Wholesale Trade	2,463	4.0	6,291	3.5	4.4
52	Retail Trade	10,738	17.5	31,526	17.4	16.7
60	Finance, Insurance, Real Estate	2,178	3.6	6,290	3.5	5.1
70	Services	10,623	17.3	34,893	19.3	23.2
91	Government (includes military)	17,362	28.3	36,293	20.0	17.8
TOTAL		**60,445**	**100.0**	**174,634**	**100.0**	**100.0**

Notes: 1 Employment does not include farm workers.
2 Includes Calhoun, Cherokee, Clay, Cleburne, Etowah, Randolph, St. Clair and Talladega counties.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 1995.

The government sector also declined in relative importance during this 10-year period, declining from 24.2 percent of total regional employment in 1985 to 20.0 percent in 1994. Within the government sector, distribution of employment between federal/civilian, military, and state and local government shifted as state and local government employment increased, and federal/civilian and military employment decreased. In 1985 federal/civilian and military employment constituted 12 percent of total regional employment, but only 7.4 percent in 1994. The majority of this decrease has occurred in Calhoun County as a result of military downsizing of Fort McClellan and the Anniston Army Depot.

4.14.2 Installation Contribution To Regional Economic Activity

FMC is the largest employer in Calhoun County and the ROI when including both military and civilian personnel employed at the installation. Based on the FY95 Data Card for FMC (FMC, 1995c), the installation employed 2,166 active duty military personnel and 2,239 civilian personnel for a total permanent payroll of 4,405 personnel. In addition to full-time military and civilian employees, there is an average of 3,160 paid trainees and students temporarily at FMC at any given time period. The installation's total expenditures in the regional economy (including goods and services, civilian personnel salaries and military personnel salaries) are estimated at approximately $189 million annually. FMC's annual military payroll is estimated at $89 million, while the civilian payroll is estimated at $37 million. Additionally, in FY95 FMC's local procurement amounted to an estimated $62.7 million, which includes approximately $17.3 million in salaries for contractual workers.

In addition to the above military and civilian personnel, FMC directly supports another 81,302 people. This group consists primarily of military retirees and their family members which comprise 76,530 people, and active duty military family members which comprise another 3,559 people. In addition, 1,213 military and civilian employees are employed at military satellite installations. In all, a total of 89,000 people are direct recipients of FMC's employment and retirement expenditures (FMC, 1995c). Although not all of those dependent upon FMC live in Calhoun County or the ROI, FMC plays a significant role in the local and regional economy.

The activity at FMC results in both direct and indirect economic impacts on the regional economy in respect to business volume, employment and income generated. According to the EIFS (Economic Impact Forecast System) Model, employment and operational expenditures at FMC are responsible for the direct generation of $99.6 million annually in regional sales (business) volume revenue; 892 jobs in the retail, service and industrial sectors; and $13.4 million in annual income in the form of wages and salaries from the jobs created in the retail, service and industrial sectors of the economy. All of the above direct economic impacts have a ripple effect on the regional economy with secondary spending, job creation and associated wages resulting from the initial economic impacts. As a result, another $115.7 million in annual business volume and 1,035 jobs are indirectly generated within the regional economy from this multiplier effect. Appendix D provides an explanation of the EIFS Model methodology, and a summary of the model input and output forecast tables for FMC existing operations.

4.14.3 Installation Workforce Structure and Salaries

The combined salary of the 4,405 permanent party military and civilian personnel totaled over $112 million in 1995. Table 4.27 provides a summary of 1995 personnel level strengths and salaries for FMC based military and civilian personnel.

Table 4.27 1995 Personnel Levels and Salaries, FMC

Employee Type	Number	Average Salary[1]	Total Salaries
Permanent Military, Officer	325	$53,500	$17,387,500
Permanent Military, Enlisted	1,841	17,900	32,953,900
Permanent Civilian, GS series	1,012	34,500	34,914,000
Permanent Civilian, Wage Grade	65	34,700	2,255,500
Non-Appropriated Funds	494	15,490	7,652,060
Contractual Workers	640	27,000	17,280,000
Private Associations	28	na	na
Total	**4,405**	**N/A**	**$112,442,960**

Note 1: Reflects actual and not programmed salary. Salaries do not include fringe and other monetary benefits.

Table 4.27 1995 Personnel Levels and Salaries, FMC			
Employee Type	**Number**	**Average Salary[1]**	**Total Salaries**
Source: Directorate of Resource Management, FMC.			

4.15 QUALITY OF LIFE

4.15.1 Housing

On-Post. A large number of personnel stationed at FMC and their dependents rely on available housing on post. The number of on-post housing units available is 8,955, which consists of 7,968 enlisted barracks spaces; 112 officer family housing units; 459 enlisted family housing units; 366 bachelor officer quarters (BOQs); and 50 rooms at the FMC Lodge (FMC, 1995c).

Single soldier enlisted quarters and trainee barracks are primarily concentrated near the Military Police School and Chemical School complexes. These quarters include two barracks in Buildings 3130 and 3131 near the Military Police School, and two complexes (Buildings 1020-1023 and 2220-2225) near the Chemical School. The newest enlisted barracks were built in 1988 at the corner of 20th Street and 3rd Avenue. The largest of the enlisted housing facilities (trainee barracks) are Buildings 1601, 1602, 1801, and 1802. These four buildings are being retained for use by ALARNG.

BOQs consists of two multi-story buildings, Buildings 3136 and 3137, located directly east of the Military Police School on 23rd Street. Immediately opposite to this housing, on the south side of 23rd Street, are two additional BOQ billets (Buildings 3133 and 3134). BOQ billeting is also located in Buildings 2275-2277 along WAC Circle. The National Guard utilizes World War II-era temporary structures for housing that are located in the western portion of the cantonment area. Billeting is also provided nearby.

There are 571 officer and enlisted family housing units on FMC. Additionally, there are 6 rock cottages on post that were converted to enlisted family quarters (Burke, pers. comm., 1996). Family housing is concentrated in the western periphery of the post, encompassing the area near Baltzell Gate Road, Summerall Gate Road, Alabama Highway 21, and 16th Avenue. Another housing area is located on "The Hill" where officer's quarters with a Spanish architectural theme line the horseshoe-shaped Buckner Circle. A secondary tier of family housing rings the officers' quarters directly below "The Hill" and along Baltzell Gate Road and Brennen Drive. A large noncommissioned officers (NCO) family housing complex exists at Baker Gate, with a second family housing complex designated as officer's quarters along Avery Drive. NCO housing is also found at the intersection of Summerall Gate Road and Sharp Road.

Off-Post. Many housing options with a substantial range of purchase and rental opportunities are available in Anniston, Calhoun County and the surrounding area to meet individual and family needs. These options include single family homes, apartments, condominiums, and manufacturing housing. In January, 1992, approximately 773 homes were available for sale within the Calhoun County area with the supply of rental apartments also abundant. Approximately 30 apartment complexes are located in Anniston and Calhoun County comprising over 2,500 rental units. Services to find housing are available through apartment finders, realty companies and realtors affiliated with the Multiple Listing Service within the surrounding area.

Table 4.28 provides a summary of the primary housing characteristics in Calhoun County and the surrounding ROI. A higher percent of the housing stock in Calhoun County consists of rental housing as compared to the overall ROI, with median monthly rents and housing values also higher in Calhoun County. The collective rental vacancy rate for all housing units in Calhoun County was 8.0 percent, lower than for the ROI and the state of Alabama. The higher costs and lower vacancy rates in Calhoun County are primarily due to housing demands associated with FMC, and Jacksonville State University. Calhoun County and the surrounding area have demonstrated the ability to accommodate shifts in housing demand in the past due to military or private sector expansion.

Table 4.28 Fort McClellan ROI Housing Characteristics		
Housing Characteristic	**Calhoun County**	**Region of Influence (ROI)**
Total Number of Units	46,753	167,730
Number of Single Family Units	34,361	120,903
Number of Multi-Family Units	5,728	15,883
Percent of Units Owner Occupied	70.3	75.0
Percent of Units Vacant	8.0	10.2
Median Value Owner Occupied Units	$51,300	$45,755
Median Monthly Gross Rent	$318	$283
Source: U.S. Census of Population and Housing, 1990		

4.15.2 Schools

On-Post. FMC operates one DOD dependent school for grades K-6 which is located in the western portion of the cantonment at 10th Street and 6th Avenue. Total enrollment for the 1994/95 school year was 330, with 66 personnel on staff, including 32 teachers, with a student to teacher ratio of approximately 10:1. The FMC Elementary School has established special programs for handicapped, gifted, and learning disabled children, and also offers special courses in emotional conflict, remedial reading and math, and speech. In addition, FMC operates a Child Development Center (CDC) near the DOD dependent school. The CDC provides pre-school nursery/kinder care services for children of working mothers of military personnel.

Off-Post. Over 90 percent of the off-post military and their dependents reside in Calhoun County. Calhoun County is served by five public school systems accredited by the Alabama State Department of Education. These public school systems, which include Anniston, Oxford, Jacksonville, Piedmont, and Calhoun County, have a total enrollment of over 20,000 students. The Calhoun County and Anniston City school systems account for the majority of public school attendees. Table 4.29 provides a brief overview of each school system.

Table 4.29 Characteristics of Public School Systems, Calhoun County					
Characteristic	**Anniston**	**Piedmont**	**Oxford**	**Jacksonville**	**Calhoun County**
Number of Elementary Schools	7	2	2	1	10
Number of Middle Schools	1	1	1	1	8
Number of High Schools	1	1	1	1	7
Total Enrollment	3,847	1,280	2,888	1,600	10,725
Number of Teachers	300	70	170	97	525
Student/ Teacher Ratio	12.8:1	18.3:1	16.9:1	16.4:1	20.4:1
Federal Impact Aid	$232,000	$2,000	$18,000	$144,000	$400,000
Source: Calhoun County Chamber of Commerce and communications with Calhoun County public school systems, 1993-94.					

Public schools throughout Calhoun County receive Federal Impact Aid based on the number of eligible students who are dependents of military personnel living on and off base or live in low-rent housing. For the 1993-94 school year, the five public school systems in Calhoun County received a total of almost $800,000 in Federal Impact Aid (FIA), with the Calhoun County School District receiving one-half of this

total. Calhoun County also contains ten private and parochial schools which provide education for children of pre-school age through grade 12.

In addition to the regular academic curriculum, the school districts offer a wide variety of special programs and opportunities designed to meet the diversity of childrens' needs. Tutorial services and advanced placement are just some of the opportunities available for gifted, handicapped, disadvantaged, and advanced students. Extracurricular activities, such as sports, scholastic competitions, and leadership development programs, are also provided to complement the academic side of education. Specific programs and specialized schools have been established for vocational/technical training and behavioral modification.

Higher education facilities and opportunities are abundant as seventeen junior colleges, and six colleges and universities are located within 60 miles (96 kilometers) of FMC. Jacksonville State University, located approximately 7 miles (11.2 kilometers) north of FMC, is the fourth largest university in the state of Alabama with an enrollment of over 8,000 students in its bachelor's and master's degree programs. The university offers programs in business, education, communications, nursing, and law enforcement. Other higher learning institutions within the immediate area include Harry M. Ayers State Technical College in Anniston; and, the Gadsden Business College and Gadsden State Junior College in Gadsden.

4.15.3 Family Support Services

On-Post. FMC provides social service programs similar to those provided in the surrounding community that aid members of the military and their families. The majority of these services are provided by the Army Community Service. The American Red Cross on FMC also serves military families. Services provided by the Red Cross include family counseling and adjustment services, emergency communication, health and welfare inquires, supportive health services, and emergency financial assistance.

Off-Post. Calhoun County has an abundance of social service organizations which serve to meet specialized needs within the community. The services these organizations provide involve many kinds of medical, shelter, financial, counseling, basic needs, and rehabilitative assistance. The majority of the recipients are low-income families, single parents, disabled individuals, elderly, or disaster stricken, and typically receive either free or low-cost services.

The Calhoun County Health Department provides medical services and counseling such as childrens' checkups, maternity care, family planning, sexually transmitted disease treatment, and Medicare/Medicaid screening. The Health Department also performs inspections of restaurant and septic and sewage systems. In addition to caring for the mentally ill and retarded, the Calhoun County Mental Health Center has many capabilities such as child counseling, group homes, drug and alcohol abuse treatment and rehabilitation, and work programs for the handicapped. Other agencies which serve the physically and mentally handicapped include St. Michael's Community Service Center and the Association for Retarded Children.

Several organizations, such as the Salvation Army, Meals-on-Wheels, Children's Services Inc., and Goodwill, offer practical assistance such as child care, shelter, rent/mortgage and utilities funding, home weatherization, clothing, food, work rehabilitation/job training, and medical services to families and individuals who are homeless, unemployed, handicapped, homebound, or financially disadvantaged. The Community Enabler and the American Red Cross specialize in providing food, clothing, shelter, medical attention, and communication in disaster and emergency situations. The American Red Cross also provides volunteer and blood services and safety training.

While some funding for these services is provided by the Federal Government and the State, a great deal of support, financial and material, comes in as charitable donations from individuals and organizations. The United Way of Calhoun County serves as a distributor to designate funding to the appropriate social service organizations.

4.15.4 Medical Facilities

On-Post. Noble Army Community Hospital provides a wide scope of services to active duty military personnel, dependents, retirees and civilian employees. In the early 1990's its staff of 250 served over 600 patients daily. In order to provide better service, Noble has expanded their Physical Therapy Clinic and Resource Management Division, and added a new X-ray file room within the past 10 years. Noble also has an exemplary Community Health Program; computerized, state-of-the-art lab services; nutritional counseling and classes; and proficient pharmacy services which fill approximately 800 prescriptions per day. (Note: Noble Army Community Hospital ceased in-care functions in 1996, and currently only provides out-patient care services).

Additional on-post health care is provided at the Consolidated Troop Medical Clinic, the Community Mental Health and Preventive Medicine Services, and the U.S. Army Dental Activity (DENTAC) at Stout Dental Clinic.

Off-Post. Three local hospitals and over 100 physicians provide primary medical care in the surrounding Anniston/Calhoun County area. All three hospitals are accredited by the Joint Commission of Accreditation of Hospital Organizations. Northeast Alabama Regional Medical Center, located in Anniston, is the county's largest medical facility with a 372-bed capacity and a staff of approximately 1,250. The hospital offers an extensive list of specialties, including MRI (Magnetic Resonance Imaging), cardiac laser surgery, nuclear cardiology treatment, and neurological surgery. It has a fully equipped, fully staffed 24-hour emergency room. In addition, the Regional Medical Center is home of Calhoun County's only accredited Cancer Treatment Center.

Stringfellow Memorial Hospital, also located in Anniston, is a non-profit, acute care medical-surgical hospital. With 125 beds and a staff of over 325, the hospital offers advanced health care, a 24-hour emergency room, and a variety of board certified physicians, including a full-time cardiologist. The most current addition to Stringfellow's line of specialties is the expansion of its neurological services. In addition, Stringfellow Memorial is home to the Diabetes Treatment Center, one of only two such centers in the state.

Jacksonville Hospital, with a staff of over 200, offers a 89-bed facility featuring a full range of care including internal medicine, physical therapy, orthopedic surgery, cosmetic surgery, pediatrics, urology, gastrourology, and emergency medicine. In recent times, Jacksonville Hospital has established the most modern radiological services in Calhoun County, and continues to enhance its women's health program which includes free education on health care and prenatal care. In addition, the hospital regularly lends teaching expertise to student nurses from nearby Jacksonville State University.

Supplementing the hospitals and physicians of Calhoun County are 45 dentists, numerous eyecare professionals, and more than 35 pharmacies. For adults who require daily supervision, adult day care is available. In addition, six long-term health care facilities and a growing number of retirement communities are available in Calhoun County and the surrounding area.

4.15.5 Shops And Services

On-Post. The primary on-post retail complex is located southeast of the traffic circle in the cantonment area on Main Post. Facilities in this area include the following: Main Post Exchange, Post Commissary, bowling center, Burger King restaurant, post office, a class six store, dental clinic, military personnel building, and the exchange service outlet. Adjacent to the west is a second significant grouping of community facilities, including the main library, post field house; theater, family fitness center, service station, bank; and, guest lodge. Other facilities include Centurion Chapel, the Community Club and the thrift shop.
The Post Exchange, completed in 1977, offers 67,775 square feet (6,100 square meters) of various household goods, and also contains snack shops, repair shops, and personal care shops. The Post

Commissary sells non-perishable and perishable food items, while the Class Six Store sells various wines, spirits, and malt beverages. The 17-bay Auto Crafts Shop with 3 racks and a paint and body shop is available to military personnel and their families for performing maintenance and repair on their own vehicles. Trained mechanics are available to offer assistance and instruction on vehicle maintenance. In addition, various tools and parts can be purchased at the shop.

The troop barracks in the southeastern portion of the cantonment area are within walking distance of several community facilities, including two gymnasiums, a dispensary, a religious education facility, and a chapel. A number of other community facilities, such as a branch exchange, a dispensary, the WAC chapel, and a gymnasium, are located within or near the Chemical School complex.

There are three battalion dining facilities capable of feeding 800 people each, and one smaller, military-operated dining facility capable of feeding 500 people. Two alternate, fully-equipped battalion facilities exist and are operated only when others are closed for repairs. Three of the dining facilities are located near the Military Police School in Buildings 1601, 1801, and 1802; two facilities are located near the Chemical School, in Buildings 1001 and 2202; and one facility is located at the reception station in Building 504. The four facilities currently operating can cumulatively serve approximately 6,900 meals per day.

Off-Post. A wide variety and large number of commercial shops and services are available in Anniston, Calhoun County and the surrounding area to supply virtually any personal need. There are several shopping centers located throughout the area, including the Quintard Mall in Oxford which contains approximately 40 stores, and the larger Gadsden Mall in Gadsden approximately 25 miles (40 kilometers) northwest of FMC.

4.15.6 Recreation

On-Post. Outdoor Recreation promotes recreational, social, and physical well-being of military personnel, their families, and other authorized users by providing activities, goods, and services in modern, well-maintained facilities. There are approximately 317 acres available for recreational use on FMC as a part of the multi-purpose land use classified as "recreation/ranges" by the installation's Geographic Resources Analysis Support System (GRASS) land use database.

A number of recreational facilities are located throughout FMC which are directly related to the installation’s fish and wildlife program as well as the entire natural resource management program. These facilities are ideal for activities including hunting, fishing, photography, and observing nature. Hunting is the highest participatory activity with approximately 16,000 mandays annually.

Two fishing lakes with picnic areas and supporting recreational facilities are available for use at FMC. These include Reilly Lake, located in the northeast corner of the cantonment area directly north of Reilly Army Airfield, and Yahoo Lake located on Iron Mountain Road in the southwest corner of the cantonment area. Picnic areas are located at each lake, with some fishing equipment available from the Outdoor Recreation Office. In addition, there are approximately 11.5 miles (18.4 kilometers) of creeks used for fishing. The recreation office is responsible for selling hunting and fishing licenses, issuing hunting and fishing permits, and collecting harvest data at the checking stations.

Some of the programs conducted on FMC utilizing the available natural resources include big buck contest, archery and gun hunting, commanders hunt, kiddie derby, paddle boats, and fishing tournaments. FMC also has a campsite area at Reilly Lake with eight sites having water and electricity, and five primitive sites.

The 18-hole Cane Creek Golf Course is the largest recreation land use in the cantonment area. Located in the western portion of the installation at Baltzell Gate Road and Galloway Road, the meandering facility includes a clubhouse, completed in 1996, with a pro shop, snack bar, shower, and lounge area.

Other passive recreational facilities include several museums - WAC Museum, Military Police Corps Regimental Museum, and the U.S. Army Chemical Corps Museum.

Off-Post. The communities surrounding FMC offer an abundance of recreational opportunities to suit almost any need. From outdoor sports to theatrical performances, the area has activities available year-round.

Calhoun County offers several sporting activities and recreational complexes. Golfers enjoy a total of six 9-hole and 18-golf courses which cover hundreds of acres of land in Anniston, Jacksonville, and Oxford. In addition, the Robert Trent Jones Golf Trail has a 27-hole golf course complex in northern Calhoun County. At Anniston's Woodland Park, softball has become the highest participant sport since the park's inception 3 years ago. The Oxford Lake and Civic Center complex contains facilities such as tennis courts, a par-three golf course and driving range, a swimming pool, and a baseball complex. For the spectator, Jacksonville State University has a Division I-A football team, and the Talladega Speedway, just beyond the Calhoun County line, hosts two major stock car races annually.

The area also has numerous outdoor parks and lakes which provide many opportunities for hiking, exploring, camping, water skiing, fishing, boating, swimming, and picnicking. Some of the parks and recreation areas nearby include DeSoto Caverns Park, Noccalula Falls Park, Willow Pointe Marina and Campground, Calhoun County Boat and Recreation Facility, Neely Henry Lake, and Cheaha State Park, the highest point in Alabama. The Ohatchee Creek Ranch, a wildlife park, contains over 50 exotic animal species from around the world.

Calhoun County has several museums and historic structures and districts for discovering historical facts about the area. The Anniston Museum of Natural History contains some of the finest examples of Southeastern natural history. The Berman Museum, located near the Anniston Museum of Natural History, contains a collection of rare weapons, unusual art and historical artifacts. The Cross Plains Depot and Museum, the Oxford Depot, Dr. J.C. Francis' Museum and Apothecary, the Tyler Hill Square Historic District, and the Victoria are among some of the other attractions of the region.

For entertainment, the Anniston Community Theater, one of the oldest theaters in the Southeast, provides year-round performances of ballet, opera, concerts, and many other fine arts. Jacksonville State University also offers a variety of theatrical productions during the summer months.

4.16 INSTALLATION AGREEMENTS

4.16.1 Memoranda of Understanding and Memoranda of Agreement

Fort McClellan provides or receives a variety of services to or from other DOD organizations, as well as state and local entities. These services are obtained under 72 Memoranda of Understanding (MOU) or Memoranda of Agreement (MOA). These services typically involve activities such as post-secondary education programs, resource and referral services for social service agencies, use of FMC facilities by non-DOD organizations, sharing of specialized medical services, and medical learning experiences.

4.16.2 Leases and Outgrants

Fort McClellan has executed a variety of agreements with state and local governmental agencies, corporations, and private individuals. These agreements cover utility and roadway easements, use of installation facilities and training areas, and provision of services on post. Leased areas associated with Main Post are those lands known as the Choccolocco Corridor, leased from the Alabama Forestry Commission.

4.16.3 Interservice And Intraservice Support Agreements

A total of 56 Interservice and Intraservice Support Agreements describe support services provided by the installation or to the installation. There are 34 interservice agreements with the installation providing support in 27 of them and receiving support in 7. There are 22 intraservice agreements with the installation providing support in 16 of them and receiving support in 6.

A review of the agreements reveals that most will not be influenced by the disposal and reuse of FMC. The agreements between FMC and the Chemical Stockpile Emergency Preparedness Program (CSEPP) at Anniston Army Depot will be influenced by the closure of FMC. Anniston Army Depot will make arrangements for CSEPP support currently provided by FMC. Selected facilities at FMC to support CSEPP are being retained. Medical, ambulance, and related services associated with the agreements will need to be provided by another source.