

Final

**U.S. Army Base Realignment and Closure 2005
Environmental Condition of Property Report
Fort Gillem, Clayton County, Georgia**



05 January 2007

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List of Acronyms and Abbreviations

The following lists of acronyms, abbreviations, and definitions are intended to be comprehensive and are contained in this ECP Report.

AAFES	Army and Air Force Exchange Service
ACM	asbestos containing material
AMC	Army Materiel Command
AR	Army Regulation
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BRAC	Base Realignment and Closure
CAP	Consolidation Acceptance Point
CD	compact disc
CECOM	Communications Electronics Command
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CFR	Code of Federal Regulations
cfs	cubic feet per second
CID	U.S. Army Criminal Investigation Command
CORRACTS	RCRA Corrective Action Sites
°F	degrees Fahrenheit
DIS	Directorate of Installation Support
DOD	U.S. Department of Defense
DOIM	Directorate of Installation Management
DPW	Directorate of Public Works
DRMO	Defense Reutilization and Marketing Office
EBS	Environmental Baseline Survey
ECP	Environmental Condition of Property – Site assessment and characterization, including clean parcel designations
EDR	Environmental Database Resources, Inc.
EOD	explosive ordnance disposal
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
ERNS	Emergency Response Notification System
ESI	expanded site investigation

List of Acronyms and Abbreviations (Continued)

FEMA	Federal Emergency Management Agency
FORSCOM	U.S. Army Forces Command
Foster Wheeler	Foster Wheeler Environmental Corporation
GA EPD	Georgia Department of Natural Resources, Environmental Protection Division
GIS	geographical information system
GSA	U.S. General Services Administration
HMIRS	Hazardous Materials Incident Report System
HMMS	Hazardous Material Management System
IRP	Installation Restoration Program
IT	IT Corporation
LBP	lead based paint
LUST	leaking underground storage tank
LQG	large quantity generator
msl	mean sea level
NFRAP	No Further Remedial Action Planned
NLA	North Landfill Area
NPL	National Priorities List
NRC	Nuclear Regulatory Commission
PCB	polychlorinated biphenyls
RC	response complete
pCi/L	picocuries per liter
RAM	radioactive materials
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RI	remedial investigation
RIP	remedy in place
RQ	reportable quantity
RSC	Regional Support Command
SAP	satellite accumulation points
SEBS	Southeast Burial Sites
Shaw	Shaw Environmental, Inc.
SI	site investigation
SQG	small quantity generator
TCE	Trichloroethene

List of Acronyms and Abbreviations (Continued) _____

USACE	U.S. Army Corps of Engineers
USACHPPM	U.S. Army Center for Health Promotion and Preventive Medicine
USATHAMA	U.S. Army Toxic and Hazardous Materials Agency
UST	underground storage tank
UXO	unexploded ordnance
UW	universal waste
VOC	volatile organic compound
VSI	visual site inspection

Definitions

Term	Definition
Base Closure Law	The provisions of Title II of the Defense Authorization Amendments and Base Closure and Realignment Act (Pub. L. 100-526, 102 Stat. 2623, 10 U.S.C. § 2687 note), or the Defense Base Closure and Realignment Act of 1990 (Pub. L. 101-510, Part A of Title XXIX of 104 Stat. 1808, 10 U.S.C § 2687 note).
BRAC Environmental Coordinator (BEC)	An employee assigned to provide work as the lead BRAC environmental coordinator for a wide variety of technical situations and activity operational requirements, directing actions with regard to schedules, priorities, methods, materials, and equipment. The role of the BEC is to provide principal oversight for the Installation Commander and BRACD regarding all BRAC related environmental programs for the installation.
Closure	All missions of the installation have ceased or have been relocated. All personnel positions (military, civilian and contractor) have either been eliminated or relocated, except for personnel required for caretaking, conducting any on-going environmental cleanup, and disposal of the base, or personnel remaining in authorized enclaves. In the context of the ECP Report, this may be referred to as “full closure.”
Chemical Warfare Materials	Items generally configured as a munition containing a chemical compound that is intended to kill, seriously injure, or incapacitate a person through its physiological effects. CWM includes V- and G-series nerve agents or H-series (mustard) and L-series (lewisite) blister agents in other-than-munition configurations; and certain industrial chemicals (e.g., hydrogen cyanide (AC), cyanogen chloride (CK), or carbonyl dichloride (called phosgene or CG)) configured as a military munition. Due to their hazards, prevalence, and military-unique application, chemical agent identification sets (CAIS) are also considered CWM. CWM does not include: riot control devices; chemical defoliants and herbicides; industrial chemicals (e.g., AC, CK, or CG) not configured as a munition; smoke and other obscuration producing items; flame and incendiary producing items; or soil, water, debris or other media contaminated with low concentrations of chemical agents where no CA hazards exist.
Discarded Military Munitions	Military munitions that have been abandoned without proper disposal or removed from storage in a military magazine or other storage area for the purpose of disposal. The term does not include unexploded ordnance, military munitions that are being held for future use or planned disposal, or military munitions that have been properly disposed of, consistent with applicable environmental laws and regulations. (10 U.S.C. 2710(e)(2))
Disposal	Per AR 405-45 , any authorized method of permanently divesting the Army of control of and responsibility for real estate and real property.
Environmental Baseline Survey (EBS)	A process by which a characterization of the environmental condition of a facility or property is conducted. An EBS is required by the Army for the transfer or acquisition of real property and identifies potential cleanup requirements and liabilities. See definition for Environmental Condition of Property (ECP).

Term	Definition
Environmental Condition of Property (ECP)	A management approach for providing efficient and effective development of a comprehensive environmental condition / liability characterization for a facility or property. The ECP process applies industry best practices and standards; provides effective oversight and quality assurance, and unifies the EBS and the (MEC) Archives Search Report steps taken in prior BRAC rounds into a unified effort. The ECP is based on the Initial Site Investigation (ISI) project approved by the Business Initiative Council (BIC). The Army's ECP Report meets DOD's ECP Report requirement.
Excess Real Property	Per AR 405-45 , any real property under the control of any Federal agency that the head of the agency determines is not required for agency needs and discharge of the responsibilities of the agency or the installation where the property is located. The excess status is assigned to the real property once a formal report of excess has been processed. Real property that has been determined excess to the Department of the Army must be screened with other Department of Defense elements before it is excess to Department of Defense.
Garrison Commander	Per General Order 4, 22 August 2002, Garrison commanders, on behalf of the regions and the IMA, will have a responsibility to provide a standard level of base support to installation customers listed on the Army Stationing and Installation Plan. The Garrison commander is responsible to ensure that training support and training enabler functions and activities are responsive to the needs of the senior mission commander on the installation in the execution of the senior mission commander's duties.
Installation	Per AR 405-45 , an aggregation of contiguous or near contiguous, common mission-supporting real property holdings under the jurisdiction of or possession controlled by the Department of the Army or by a State, commonwealth, territory, or the District of Columbia, and at which an Army unit or activity (Active, Army Reserve, or Army National Guard) is assigned. An installation is a single site or a grouping of two or more sites for the purposes of real property inventory control. The real property accountability officer is at the installation level.
Installation Commander	Per AR 600-20 , the installation commander is normally the senior commander on the installation. In addition to mission functions, the installation commander has overall responsibility for all real estate, facilities, base support operations, and activities on the installation.
Lead Organization	Per the BRAC 2005 Implementation Plan Guidance, the Army organization which will have the lead responsibility for preparation of an installation Implementation Plan. This will generally be the Army organization which has operational control of the installation identified in the BRAC recommendations.
Local Redevelopment Authority (LRA)	Any authority or instrumentality established by State or local government and recognized by the Secretary of Defense, through the Office of Economic Adjustment, as the entity responsible for developing the redevelopment plan with respect to the installation, or for directing implementation of the plan.

Term	Definition
Material Potentially Presenting an Explosive Hazard (MPPEH)	Material potentially containing explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization, or disposal; and range-related debris); or material potentially containing a high enough concentration of explosives such that the material presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, or ventilation ducts that were associated with munitions production, demilitarization or disposal operations). Excluded from MPPEH are munitions within DoD's established munitions management system and other hazardous items that may present explosion hazards (e.g., gasoline cans, compressed gas cylinders) that are not munitions and are not intended for use as munitions.
Military Installation	Per Section 2910 of Title XXIX, Defense Base Closure and Realignment Act of 1990, as amended , the term “military installation” means a base, camp, post, station, yard, center, homeport facility for any ship, or other activity under the jurisdiction of the Department of Defense, including any leased facility. This term does not include any facility used primarily for civil works, rivers and harbors projects, flood control, or other projects not under the primary jurisdiction or control of the Department of Defense.
Munitions Constituents	Any materials originating from unexploded ordnance, discarded military munitions, or other military munitions, including explosive and non-explosive materials, and emission, degradation, or breakdown elements of such ordnance or munitions. (10 U.S.C. 2710(e)(3)). MEC includes Unexploded Ordnance (UXO), as defined in 10 U.S.C. 2710(e)(9) ; Discarded Military Munitions (DMM), as defined in 10 U.S.C. 2710(e)(2) ; and munitions constituents (e.g., TNT, RDX) present in high enough concentration to pose an explosive hazard.
Munitions and Explosives of Concern	This term, which distinguishes specific categories of military munitions that may pose unique explosives safety risks, means: <ul style="list-style-type: none"> (A) Unexploded Ordnance (UXO), as defined in 10 U.S.C. 2710(e)(9); (B) Discarded military munitions (DMM), as defined in 10 U.S.C. 2710(e)(2); or (C) Munitions constituents (e.g., TNT, RDX) present in high enough concentrations to pose an explosive hazard.
Military Munitions	<p>Military munitions means all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard. The term includes confined gaseous, liquid, and solid propellants; explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries, including bulk explosives, and chemical warfare agents; chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges; and devices and components thereof.</p> <p>The term does not include wholly inert items; improvised explosive devices; and nuclear weapons, nuclear devices, and nuclear components, other than non-nuclear components of nuclear devices that are managed under the nuclear weapons program of the Department of Energy after all required sanitization operations under the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) have been completed. (10 U.S.C. 101(e)(4)(A) through (C))</p>

Term	Definition
Personal Property	<p>According to 41 CFR 102-36.40, personal property is defined as: “Any property except real property. The term excludes records of the Federal Government, and naval vessels of the following categories: battleships, cruisers, aircraft carriers, destroyers, and submarines.” “Related personal property” means any personal property that is an integral part of real property. It is:</p> <p style="padding-left: 40px;">Related to, designated for, or specifically adapted to the functional capacity of the real property and removal of this personal property would significantly diminish the economic value of the real property, or</p> <p style="padding-left: 40px;">Determined by the Administrator of General Services to be related to the real property</p>
Real Property	<p>AR 405-90: Real property consists of lands and improvements to land, buildings, and structures, including improvements and additions, and utilities. It includes equipment affixed and built into the facility as an integral part of the facility (such as heating systems), but not movable equipment (such as plant equipment). In many instances, this term is synonymous with 'real estate'</p>
Realignment	<p>Any action that both reduces and relocates functions and DoD civilian personnel positions, but does not include a reduction in force resulting from workload adjustments, reduced personnel or funding levels, skill imbalances, or other similar cause. A realignment may terminate the DoD requirement for the land and facilities on part of an installation. That part of the installation shall be treated as “closed”, and in the context of this document referred to as a “partial closure”.</p>
Senior Mission Commander	<p>The Senior Mission Commander is a General Officer (G.O.) with command oversight of one or more non-G.O. Installation Commanders. The Senior Mission Commander conveys MACOM mission priorities to the Installation Commander, and provides executive oversight and communicates installation management priorities not established by HQDA or IMA to the Installation Commander and Garrison Commander. Senior Mission Commanders' orders from the General Officer Management Office (GOMO) will specify the installations for which they will serve as SMC.</p>
Special Installation	<p>An Army installation which is under administrative control of ACSIM Installation Management Agency (IMA), yet operated and funded by a MACOM (e.g., Army Ammo Plant, Hospital, etc.) where there is a single Mission/Garrison Commander.</p>
Unexploded Ordnance	<p>Military munitions that (A) have been primed, fused, armed, or otherwise prepared for action; (B) have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel, or material; and (C) remain unexploded whether by malfunction, design, or any other cause. (10 U.S.C. 101(e)(5)(A) through (C))</p>

1.0 Executive Summary

This Environmental Condition of Property (ECP) Report has been prepared for Fort Gillem, Georgia, which is hereafter referred to as the “Property”. The purpose of this ECP Report is to determine the environmental condition of the Property in preparation for a Real Property Disposal as a result of the Base Realignment and Closure (BRAC) 2005 Commission recommendation to close the Property. Although this ECP covers the entire Property, a portion of the Property will remain with the Army as a Reserve Enclave. In addition, the Federal Emergency Management Agency (FEMA) currently occupies another portion of the Property. This ECP was developed in accordance with the Department of Defense (DoD) 4165.66-M, Base Redevelopment and Realignment Manual dated 1 March 2006.

This executive summary provides a brief description of the current and former uses of the installation and areas of potential environmental concern that were evaluated during the ECP process. Detailed information associated with the summary presented below is provided in the main body of this document.

Site Description and Historical Use

Fort Gillem is located in Forest Park, Georgia, a suburb south of Atlanta in Clayton County, between Georgia Highway 54 (Jonesboro Road) and U. S. Highway 23 (Moreland Avenue). It occupies 1,427 acres and its dimensions are approximately 2.5 miles east to west and approximately 1.5 miles north to south. The geographic location is latitude 33 degrees, 35.5 minutes north and longitude 84 degrees, 19.7 minutes west.

Fort Gillem dates to late 1940 when Congress appropriated funding for the construction of two installations, the Atlanta Quartermaster Depot and the Atlanta Quartermaster Motor Base, and selected a site near Conley, Georgia. Construction started in 1941 and both installations were completed in 1942. On April 1, 1948, the depot and motor base were merged and renamed the Atlanta General Depot.

In 1962, the installation name was changed to the Atlanta Army Depot. On July 18, 1973, responsibility for the Atlanta Army Depot was transferred from the Army Material Command (AMC) to U. S. Army Forces Command (FORSCOM). The Atlanta Army Depot was deactivated in 1974 and renamed Fort Gillem in honor of Lieutenant General Alvan C. Gillem, Jr., who began his career as a private at Fort McPherson in 1910 and retired 40 years later as commanding general of the Third U. S. Army. Administrative control of the Installation was transferred to Fort McPherson.

Fort Gillem's primary missions were training and materiel supply through World War II, the Korean War, the Berlin Airlift, the Cuban Crisis, the Vietnam War, and Operation Desert Shield/Desert Storm during the Persian Gulf conflict. Fort Gillem supports FORSCOM readiness missions and is home for many FORSCOM and Fort McPherson activities. Fort Gillem currently provides warehouse and office space to the Army and Air Force Exchange Service (AAFES) and to the Federal Emergency Management Agency (FEMA).

The surrounding properties are predominantly residential to the north, commercial to the west and southwest, a mixture of commercial/industrial to the east and a mixture of residential, commercial and industrial to the south.

Based on a review of property reports and documentation, a visual site inspection (VSI), research of available historical information, interviews with knowledgeable parties, and an environmental database search, the following environmental information has been compiled:

Range Operations. There are 11 active or inactive operational ranges at Ft. Gillem. With the exception of 2 training areas, most of the identified training areas had no history of munitions use. Munitions were historically used at Training Area 1 that included the former Skeet and Trap Range that was used for recreational shooting. Training Area 2 included the former Pistol Range that was used for small arms training only. There are no indications of munitions usage at the remainder of the training areas. Only the former Skeet and Trap Range and the former Pistol Range constitute a recognized environmental condition (REC).

Although ordnance was stored in buildings 321 through 326 and Building 739 at Fort Gillem, there are no documented releases or recognized environmental conditions associated with these buildings.

Storm Water Outfalls. Some operations historically discharged wastewater to storm drains without permits. This could have deposited recalcitrant (i.e., slow to degrade) contaminants at storm water outfalls. Eighteen outfalls are located on the installation and six outfalls are associated with industrial activities. The industrial activities included:

- Vehicle maintenance (Outfalls 249, 228, 183, and 129)
- Fueling (Outfalls 190 and 183)
- Hazardous waste storage (Outfall 86)
- Materials storage (Outfall 129)
- Sandblasting (Outfall 183).

These outfalls associated with industrial activities constitute a REC.

Installation Restoration Program. Fort Gillem is listed in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLIS) database (site identification number 0401865, Environmental Protection Agency (EPA) Facility Identification Number GA0210020046). The database indicates a discovery reported on 12 February 1988 with a preliminary assessment completed on 15 August 1988. The database also indicates that the status of Fort Gillem is No Further Remedial Action Planned (NFRAP). The Army, however, voluntarily initiated and continues to implement an Installation Restoration Program (IRP) for hazardous waste sites identified in the installation assessment (U.S. Army Toxic and Hazardous Materials Agency [USATHAMA], 1980). Fort Gillem has an ongoing IRP for six sites including:

- FTG-01, North Landfill Area (NLA)
- FTG-04, 900 Area Solvent Disposal Pit
- FTG-07, Southeast Burial Sites (SEBS), Burial Site No. 1
- FTG-09, SEBS, Burial Site No. 3
- FTG-10, SEBS, Burial Site No. 4
- FTG-13, Western Sewage Treatment Plant.

These six sites are included in a performance-based contract awarded by the Army in fiscal year 2005. The current scope of the performance-based contract is to take five of the sites to remedy in place (FTG-01, FTG-04, FTG-07, FTG-09, and FTG-13) and the sixth site (FTG-10) to response complete (RC) by 30 September 2007. The six IRP sites constitute a REC.

Previous environmental investigations have documented off-property surface water and groundwater contamination by volatile organic compounds (VOCs), particularly trichloroethene (TCE) and 1,1,2,2-tetrachloroethane, originating from five of the six IRP sites. Relatively large and concentrated (maximum concentrations exceeding 100 times the maximum contaminant level) off-property groundwater plumes have originated from the FTG-09 and FTG-01 sites. TCE in groundwater has also migrated off post from the FTG-04, FTG-07, and FTG-13 sites. Concentrations of VOCs in groundwater and surface water samples indicate the off-property plumes associated with this three sites are smaller and much less concentrated than the off-property plumes originating from the FTG-01 and FTG-09 sites.

Seven sites have attained response complete. The Georgia Environmental Protection Division (GA EPD) has reviewed or is currently reviewing documents related to the sites, but has not issued approval or concurrence. The seven sites that have attained response complete include:

- FTG-02, Southeast Area Dump Site
- FTG-03, 900 Area Industrial Wastewater Treatment Plant
- FTG-05, 900 Heating Plant
- FTG-06, 900 Area Vehicle Wash Rack
- FTG-08, SEBS Burial Site No. 2
- FTG-11, Unexploded Ordnance Site
- FTG-14, Eastern Sewage Treatment Plant

Military Munitions Response Program. There are no closed, transferred or transferring ranges at this time, only active or inactive operating ranges (Malcolm Pirnie, 2006).

Hazardous Substances and Hazardous Waste. Several hazardous substances associated with base operations at the property include strong acids, bases, solvents, heavy metals, and materials associated with laboratory operations and building maintenance. Identified hazardous substances include arsenic, asbestos, cadmium and cadmium hydroxide, chlorine, ethylene glycol, lead, mercury, nickel hydroxide, sulfuric acid, and xylene. Fort Gillem currently maintains hazardous material data in the Hazardous Material Management System (HMMS). Fort Gillem's HMMS team collects data on hazardous materials and hazardous waste from all agencies that handle these substances at Fort Gillem for input to the HMMS.

Currently hazardous substance disposal is reported by various departments and tenants for input into the HMMS system as substances are received and disposed. This information is used to facilitate centralized hazardous material control and management and to assist with environmental reporting. Hazardous chemicals stored in quantities greater than the storage quantity threshold include ethylene glycol, and sulfuric acid.

Hazardous waste is stored at Fort Gillem in a 90-day yard and various satellite accumulation points (SAP). Under the State of Georgia regulations, SAP cannot accumulate more than 55-gallons at a time and once the amount is exceeded, the excess waste must be moved within 3 days to a 90-day area. After 90 days the waste must be transported off-post by licensed hazardous waste transporters.

Various buildings operate as SAP that regularly store solvents, acids, paints, toxins, aerosols, metals, mercury and other hazardous substances.

Petroleum Substances-USTs/ASTs. There are currently eight (8) active USTs and twenty six (26) active aboveground storage tanks (ASTs) present at the Property. A total of fifty six

(56) USTs and two (2) ASTs have either been removed or closed in place. The tanks were primarily used for the storage of gasoline, diesel fuel, heating oil, and waste oil. Following is a summary of the available documentation for historic and current tanks at the property:

- During tank removal activities, there was either no evidence of soil contamination or soil contamination was above detection limits but below regulatory limits at eleven underground storage tank (UST) sites. All removed tanks at Buildings 307 (one [1] tank), 308 (one [1] tank), 309 (one [1] tank) 310 (one [1] tank) , 404 (two [2] tanks), 505 (one [1] tank), 512 (one [1] tank), 925 (one [1] tank), and one tank each at Buildings 106 (the tank had no documented label), 213 (one [1] tank, 213-FO4), and Building 403 (one [1] tank, 403-1). These former UST locations do not constitute a REC.
- During tank removal activities, soil contamination was detected at the following sites, however remedial actions were completed or are currently ongoing:
 - Soil removal, often with over excavation, was conducted at Buildings 101 (four [4] tanks), 111 (two [2] tanks), 114 (one [1] tank), 210 (one [1] tank), 214 (one [1] tank), 312 (two [2] tanks), 507 (two [2] tanks), 511 (one [1] tank), 931 (one [1] tank) and for two (2) tanks located at Building 213 (two [2] tanks, 213-FO2 and 213-FO3) . These former UST locations do not constitute a REC
 - Remedial activities are currently ongoing at five buildings; Buildings 401 (five [5] tanks), 504 (four [4] tanks), 606 (three [3] tanks), 610 (two [2] tanks), and T-926 (number of tanks not available). These former UST locations are considered a REC.
- Although soil contamination was detected during tank removal activities associated with Buildings 305 (one [1] tank) and 935 (two [2] tanks), no documentation regarding remedial activities was available for review. These former UST locations are considered a REC.
- There was no available documentation regarding the status of the tanks at six of the UST locations. The locations included Buildings 304 (one [1] tank), 400 (four [4] tanks), 406 (one [1] tank), 737 (one [1] tank), 106 (three [3] tanks) and 403 (one [1] tank). These former UST locations are considered a REC.

- There were no documented releases for any of the former or active aboveground storage tanks (ASTs) at the property. Visual site inspections of the current aboveground storage tanks did not reveal any evidence of leaks or spills. No RECs are associated with the current or former AST locations.
- A gas station was located in the former Building 105. The building was demolished in the early 1990s. No documentation was available regarding the status of the site. This site constitutes a REC.

Cleanup was conducted at nine of the UST sites (Buildings 101, 111, 312, 401, 504, 606, 610, T-926, and 931) at Fort Gillem that are listed in the GA EPD leaking UST program. Buildings 101, 111, 312, and 931 are listed as no further action sites, Buildings 401, 504, 610, and T-926 are listed as clean-up initiated and Building 606 is listed as a monitoring only site.

Oil/Water Separators. Six oil/water separators currently exist on the Fort Gillem property. They are located at Building 113, Building 402/413, Building 606, Building 610, Building 611 and Building 904 and are maintained on a regular basis. Seven former oil/water separators at Buildings 305, 307, 312, 918E, 918W, 922, and 927 were removed as part of construction projects. No releases were documented at these former oil/water separators. Visual site inspections of the current oil/water separators did not reveal any evidence of leaks or spills. None of the oil/water separators are considered to be a REC.

PCBs. All transformers at Fort Gillem have been surveyed and those containing polychlorinated biphenyls (PCBs) were removed in 1987. An additional survey was performed in 2001 and of the transformers sampled, none were found to contain PCBs at concentrations above 50 ppm. In-service transformers with PCB residual are replaced when they fail. There is no known record or documentation of PCB leaks or spills at the base. No RECs associated with PCBs were identified as part of this ECP.

Asbestos Containing Materials. Current records indicate there have been several asbestos containing materials (ACM) surveys conducted for the buildings at Fort Gillem. The surveys have been conducted to identify ACM in place.

- Records indicate that asbestos surveys were conducted for 20 structures.
- Of the 20 structures surveyed, 19 have ACM survey results documentation; 15 structures were found to contain both friable and non-friable asbestos and 4

structures were found to contain only non-friable asbestos. All structures with reported asbestos have an asbestos operation and maintenance plan in place.

- There are 164 buildings on the Fort Gillem property that have no documentation of asbestos surveys performed.

Lead-Based Paint. The DoD Guidelines for lead based paint (LBP) in Military Housing (AR 420-70 Buildings and Structures, Department of the Army, 1997) specifies that LBP surveys and risk assessments are required for residential housing units. Currently, there is not a comprehensive or programmatic report for the residential housing units on the Property. Many of the facilities and buildings at Ft. Gillem were constructed before the DoD ban on the use of lead-based paint in 1978 and are likely to contain one or more coats of such paint. In November 2002, surface dust sampling was conducted in family housing to assess lead concentration in dust. A total of 53 samples collected in 5 buildings (135 through 139) indicated that there were no lead dust levels above regulatory limits. No documentation of lead dust sampling was found for five family housing buildings (131, 133, 134, 301, and 828) constructed prior to 1978. A comprehensive or programmatic report for Ft. Gillem identifying current quantities of LBP does not exist. There are no records found indicating lead remediation or abatement projects.

Radiological Materials. As reported in the 2007 Historical Site Assessment, ten (10) buildings/complexes and one (1) outdoor area at Fort Gillem from the above table were found to be impacted from historical use of radioactive materials (RAM) (Cabrera, 2007). The buildings and outdoor area classified as impacted include building Nos. 208B, 310B, 400 (Electronic Maintenance Area and waste storage box only), 401, 708, 710, 714, 813-822, 935, and the NLA. Based upon the found radiological impacts, these areas constitute a REC.

Historical Landfills/Dumps. One disposal pit and six burial sites were developed and historically used at Fort Gillem. Most of the disposal sites were out of use by the 1960s to early 1970s, with one (NLA) in use until about 1980. All of these seven disposal sites have been investigated under the IRP.

Explosive-Contaminated Structures. No surface contamination from explosives has been observed or is anticipated.

Radon. A radon survey was conducted for Priority 1 and Priority 2 buildings during 1990. All detections for Radon were below the 4 picocuries per liter (pCi/L) action level, with the exception of Building 142 (family housing unit), which had a level of 4.8 pCi/L. According to the EPA's categorization of radon zones, Clayton County, GA is qualified as a radon zone 2,

meaning that it has a predicted average indoor radon screening level greater than or equal to 2 pCi/L, and less than or equal to 4 pCi/L. The EPA's action level for radon is 4 pCi/L.

Pesticides. The Property historically had pesticide mixing and storage in Building 116. The building has since been demolished. No additional information is available regarding the building. A 1997 U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM) inspection noted a pesticide storage area in Building 310. The inspection noted the floor of pesticide mixing and storage areas was not properly sealed and could leak. Buildings 116 and 310 constitute a REC.

Adjacent Properties. Adjacent properties were evaluated through the search of commercially available databases, interviews, and through driving the roads surrounding Fort Gillem. One off-site property was identified as having impacted the Property. Sammons Septic Tank Service, in operation from 1950 to 1984, was located southwest and approximately 1,000 feet upgradient of the southwestern portion of Fort Gillem. All structures from this business have been removed and another business currently occupies the location. Information obtained during the records search suggests that potentially hazardous sludges were handled and disposed of on the property in the 1970s. Some runoff may have occurred to the Fort Gillem property, therefore, this former facility is considered a REC.

Other Issues

Building 101 was a former incinerator facility. No information regarding the incinerator was available. Building 101 constitutes a REC.

The 1980 installation assessment (USATHAMA) states that some buried wastes were disposed of in floodplain areas in close proximity to perennial streams. Problems have arisen in the past with these materials; some materials exposed by erosion have washed off the installation, prompting complaints from citizens in surrounding residential areas. Construction of coffer dams and erosion control structures in the floodplains completed in the 1990s stabilized the areas of the landfills prone to erosion along these perennial streams. In the future, however, the erosion control structures must be adequately maintained to prevent buried wastes from entering the streams. This buried waste is considered a REC.

ECP Categorization

Based on the information gathered during the development of the ECP, areas at the property were grouped into standardized parcel categories using DOD guidance: All areas with positive

findings received a unique parcel number and designation of one of the seven ECP categories or qualification as appropriate.

Most of the areas on the Property were identified as “uncontaminated” property (Category 1) comprising approximately 731.5 acres. These were areas in which there was no evidence of release or disposal of hazardous substances or petroleum products, and to which there had been no migration of such substances from adjacent areas. Historical records reviewed and the VSI found no indication that the release or disposal of hazardous substances or their derivatives has occurred, including no migration of these substances from adjacent areas at the following properties:

- Unexploded Ordnance Disposal Site (FTG-11)
- USTs that had no evidence of contamination at Buildings 308, 309, 505, and 512
- Former and current oil/water separators
- Aboveground storage tanks at Buildings 119, 605 and 900
- Hazardous waste collection areas
- Most of the buildings on the Property except four buildings; Buildings 101, 105, 116, and 310
- Marchman Lake
- Training areas where no munitions were utilized (Training Area 1A, Training Area 2A, Training Area 2B, Training Area 3, Training Area 4, Training Area 5, Training Area 6, Training Area 7, and the Airstrip)
- The majority of the areas on the Property, Parcels 25(1) and 28(1).

Parcel numbering was assigned to each existing Installation Restoration Program (IRP) site, non-IRP sites, petroleum release areas and any other identified area of concern as follows:

- **Category 2 - Areas in which only release or disposal of petroleum products has occurred.** Areas measuring approximately 248 acres were classified as category 2 property. Category 2 parcels included tanks where there was evidence of contamination or no information was available regarding the status of the tanks.
- **Category 3 - Areas in which release, disposal or migration of hazardous substances has occurred, but in concentrations that do not require a removal or other remedial response.** Category 3 areas

included five IRP sites; the Southeast Area Dump Site (FTG-02), 900 Area Industrial Waste Water Treatment Plant (FTG-03), 900 Area Vehicle Wash Rack (FTG-06), Burial Site No. 2 (South Street and Boundary Road) (FTG-08), Eastern Sewage Treatment Plant (FTG-14), and the area on the western portion of the Property with underlying groundwater plumes. Category 3 area measures approximately 54 acres.

- **Category 4 - Areas in which release, disposal, or migration of hazardous substances has occurred, but all removal or other remedial actions necessary to protect human health and the environment have been taken.** One IRP site, 900 Area Heating Plant, measuring approximately 2 acres was identified as Category 4 property.
- **Category 5 - Areas in which release, disposal, or migration of hazardous substances has occurred, and removal or other remedial actions are under way, but all required actions have not yet been taken.** One IRP site, 900 Area Solvent Disposal Pit, measuring approximately 8 acres was identified as Category 5 property.
- **Category 6 -Areas in which release, disposal, or migration of hazardous substances has occurred, but required remedial actions have not yet been implemented.** Areas measuring approximately 379 acres were classified as category 6 property. These included five IRP sites; FTG-01, North Landfill Area; FTG 07, Burial Site #1; FTG-09, Burial Site #3; FTG-10, Burial Site #4; and FTRG-13, Western Sewage Treatment Plant.
- **Category 7 - Areas that have not been evaluated or require additional evaluation.** Areas measuring approximately 4.5 acres were classified as category 7 property. Category 7 property included the former incinerator (Building 101), the former gas pump (Building 105), the storm water outfalls, Training Area 1 including the former Skeet Trap range, and the pesticide storage areas.

Of the total 1,427 acres of the Property occupied by Fort Gillem, 238 acres will be retained by the Army as a Reserve Enclave. Fort Gillem currently provides warehouse and office space measuring approximately 247 acres to FEMA in support of its disaster relief activities. The remaining 942 acres is government excess property. Nine of the parcels are included in the Reserve Enclave, five of the parcels are included in the FEMA area, and one parcel is shared between the Reserve Enclave and the FEMA areas. The remainder of the parcels is included in the government excess property.

2.0 Purpose

2.1 General

This Environmental Condition of Property (ECP) report has been prepared to meet the requirements of the U.S. Department of Defense (DOD) 4165.66-M, *Base Redevelopment and Realignment Manual*. The Army prepares an ECP for the following purposes:

- Provide the public with information relative to the environmental condition of the property.
- Assist in community planning for the reuse of BRAC property.
- Assist Federal agencies during the property screening process.
- Provide information for prospective buyers.
- Assist prospective new owners in meeting the requirements under EPA’s “All Appropriate Inquiry” regulations when they become final.
- Provide information about completed remedial and corrective actions at the property.
- Assist in determining appropriate responsibilities, asset valuation, and liabilities with other parties to a transaction.

The ECP contains the information required to comply with the provisions of 40 CFR, Part 373, that require that a notice accompany contracts for the sale of, and deeds entered into for the transfer of, federal property on which hazardous substances may have been disposed of or released. 40 CFR 373 stipulates that a notice is required if certain quantities of designated hazardous substances have been stored on the property for one year or more—specifically, quantities exceeding (1) 1,000 kilograms or the reportable quantity (RQ), whichever is greater, of the substances specified in 40 CFR 302.4, or (2) 1 kilogram of acutely hazardous waste as defined in 40 CFR 261.30. A notice is also required if hazardous substances have been disposed of or released on the property in an amount greater than or equal to the RQ. AR 200-1 requires that an ECP address asbestos, lead-based paint, radon, and other substances potentially hazardous to health.

The ECP Report is not prepared to satisfy a real property purchaser's duty to conduct an “appropriate inquiry” to establish an “innocent purchaser defense” to CERCLA 107 liability. Any such use of the ECP by any party is outside the control of the U.S. Army and beyond the

scope of the ECP. The U.S. Army, its officers, employees, and contractors make no warranties or representations that any ECP report satisfies any such requirements for any party.

2.2 Scope

The scope of work for this ECP requires conformance with AR 200-1, *Environmental Quality, Environmental Protection and Enhancements* (Paragraph 15-6), dated 21 February 1997, CERCLA §120 and meets the requirements for the DOD 4165.66-M, *Base Redevelopment and Realignment Manual*.

The ECP covers the land, facilities, and real property assets within the boundaries of Fort Gillem, which occupies 1,427 acres in Clayton County, Georgia, approximately 10 miles south of downtown Atlanta. The property is surrounded by residential and commercial development. Figure 1 is a site location map.

2.3 Limitations

This ECP Report presents a summary of readily available information on the environmental conditions of, and concerns relative to, the land, facilities, and real property assets at Fort Gillem. The findings included in the report are based on a record search of documents and Shaw's site reconnaissance conducted between 14 June and 5 July 2006. Historical environmental investigation reports and site historical documents were reviewed in support of this ECP. Information obtained from these other studies is reflected within this ECP Report by reference. A complete list of references is provided as Chapter 7.0.

A representative number of buildings were visually inspected during the site reconnaissance. A 100 percent visual inspection of all buildings was not practical within the scope and schedule of the project because of the size of the installation and the number of buildings. Similarly, a 100 percent visual inspection of all undeveloped areas could not be performed. The VSI included a driving tour of the entire facility and the facility perimeter. Additionally, a systematic survey of the facility on foot was also conducted. Therefore, although not all of the buildings were inspected with the same level of detail, all of the facilities were visualized. All buildings likely to have operations resulting in a recognized environmental condition were thoroughly inspected. Additionally, representative buildings with operational histories that were not expected to result in an environmental condition (i.e. administrative and residential structures) were given a thorough inspection. No sampling or analysis was conducted during this survey.

A search of state and federal environmental databases was completed by Environmental Database Resources, Inc. (EDR) and the findings of their report are summarized in Section 3.6.1.

2.4 Report Organization

The remainder of this report discusses the methods used to complete the ECP and findings of the ECP. Chapter 3.0 describes the methods used to conduct the ECP. Chapter 4.0 discusses Fort Gillem’s history, facility operations, infrastructure, and environmental setting. Chapter 5.0 elaborates on the findings of the ECP, organized by relevant environmental “issues” (e.g., contaminant, contamination matrix, facility, or operation). Chapter 6.0 presents the conclusions of the ECP. Chapter 7.0 lists the references used in the report.

The appendices are arranged to allow the reader to determine the full range of environmental issues relating to the installation. Appendix A is a listing of the ECP Parcels and the 2006 visual site inspection approach summary. Historical information and site background information is provided in Appendix B (aerial photography analysis), Appendix C (Sanborn maps), and Appendix D (historical topographic maps). Appendix E provides the regulatory database report for the site. Appendix F provides the jurisdiction summary. Appendix G provides information from the site interviews. Appendix H is a comprehensive listing of the transformers located on the Property. Addendum 1 is a copy of the Historical Site Assessment and Addendum to Environmental Condition of Property Report (Cabrera, 2007).

3.0 Survey Methodology

3.1 Development of Study Sections

The information gathered during the development of the ECP was used to group areas at Fort Gillem into standardized parcel categories using DOD guidance: All areas with positive findings received a unique parcel number and designation of one of the seven ECP categories or a non-CERCLA qualification as appropriate.

The ECP Category definitions are summarized on Table 3-1.

Table 3-1
ECP Categories

ECP Category	Definition
1	Areas in which no release or disposal of hazardous substances or petroleum products has occurred, and to which there has been no migration of such substances from adjacent areas.
2	Areas in which only release or disposal of petroleum products has occurred.
3	Areas in which release, disposal or migration of hazardous substances has occurred, but in concentrations that do not require a removal or other remedial response.
4	Areas in which release, disposal, or migration of hazardous substances has occurred, but all removal or other remedial actions necessary to protect human health and the environment have been taken.
5	Areas in which release, disposal, or migration of hazardous substances has occurred, and removal of other remedial actions are under way, but all required actions have not yet been taken.
6	Areas in which release, disposal, or migration of hazardous substances has occurred, but required remedial actions have not yet been implemented.
7	Areas that have not been evaluated or require additional evaluation.

Generally, the numbering was assigned as follows:

- Existing IRP sites (Parcels 1-14)
- Underground and aboveground storage tanks (USTs/ASTs) (Parcels 15-18)
- Sites in which former base activities would most likely be a source of potential contamination (Parcels 19-21)
- Training Areas (Parcel 22)
- Pesticide Storage Areas (Parcels 23 and 24)

- The remaining uncontaminated areas (Parcels 25 and 28).
- The area on the western portion of the Property with an underlying groundwater contamination plume and the flood plain areas close to the perennial streams (Parcels 26 and 27).

Qualified Parcels are those parcels that were identified as containing other environmental or safety concerns such as asbestos, lead-based paint, radionuclides, radon, or PCB.

The designations for each ECP parcel included in the Reserve Enclave, the FEMA area, and the Government Excess Property are presented in Table A-1 (Appendix A). Nine of the parcels are included in the Reserve Enclave and five of the parcels are included in the FEMA area and one parcel is shared between the Reserve Enclave and the FEMA areas. The remainder of the parcels is included in the government excess property.

3.2 Visual Site Inspection

A VSI involving a driving tour of the facility and its perimeter as well as a systematic survey by vehicle and on foot through each section of the property was conducted between 14 June and 5 July 2006. The primary purpose of the VSI was to verify information from the document review and to identify potential environmental concerns. All accessible roads on the facility were driven during the VSI. A VSI was performed for 34 buildings selected as representative samples from groups of similar buildings. A summary of the buildings visited is included in Table A-2 (Appendix A).

A reconnaissance of the base perimeter was conducted to evaluate adjacent property uses that could contribute to any environmental contamination detected on the Property. The field team walked on roads along the perimeter to visually identify any contiguous properties that appeared, in the team's professional judgment, to have potential contamination that could migrate to the installation. Typical of properties that could pose a contamination risk are dry cleaners, gas stations, and industrial facilities. The findings of the perimeter survey are presented in Section 5.17.

3.3 Aerial Photography Analysis

A comprehensive aerial photographic analysis was conducted as part of this ECP and a complete copy of this report, including the photographs, is included in Appendix B.

Aerial photographs were obtained and interpreted covering the entire Property for the period from 1939 to 1988. Potentially significant findings are discussed briefly below and the significance of these findings, if any, is discussed in detail in Chapter 5.0.

The photographs reviewed are as follows:

Table 3-2
Aerial Photographs Reviewed

Date	Agency	Roll & Frame Number	Scale
21 December 1939	NARA ^a	126-128, 135-137	1:40,000
18 February 1950	EPIC ^b		1:12,700
14 January 1955	EPIC ^b		1:12,350
7 October 1958	EPIC ^b		1:12,700
5 December 1968	EPIC ^b		1:12,700
20 February 1972	EPIC ^b		1:11,700
1978	PMAPS ^c	2/15, 17	1:28,800
30 March 1984	BERRY ^d	6/6-8,7/3-6, 8/6-8	1:12,000
16 March 1988	USGS ^e	735; 79, 80	1:40,000

a National Archives and Records Administration.

b Environmental Photographic Interpretation Center, Warrenton, VA.

c PhotoMaps, Inc., Pinson, Alabama.

d Jack Berry & Associates, Peachtree City, Georgia.

e U.S. Geological Survey, U.S. Department of the Interior.

The aerial photograph from 1939 was taken before the construction of Fort Gillem. The Property was undeveloped and the land was primarily used for agriculture. The surrounding area was similarly undeveloped and also used for agricultural purposes.

An aerial photographic analysis was conducted in May 1981 by the Environmental Photographic Interpretation Center. Photographs covering the entire Property for the period from 1950 to 1972 were obtained from the imagery libraries of the U.S. Geological Survey and the Agricultural Stabilization and Conservation Service. Five years of photography were examined under a stereoscope to identify any significant areas of disturbance. A heat generating plant with associated fuel piles was noted in the 1950 through 1972 aerial photographs. There were no other significant findings for the Property.

The photograph dated 1978 showed a disposal area, an extensive cleared or graded area, and extensive ground scarring in the northwestern portion of the installation. Those features represent activity at the North Landfill Area (NLA) (IRP site FTG-01), which was in use from 1941 to approximately 1980. A skeet range was also visible in this portion of the installation. The aerial photograph review identified two water/sewage treatment plants located in the western portion of the installation. The two water/sewage treatment plants are IRP sites FTG-03 and FTG-13. The wastewater treatment plant (FTG-03) was constructed in the mid to late 1940s,

renovated in 1969, and then operated from 1972 to 1978. The structures were demolished in 2004 and a recommendation for no further action has been requested. The sewage treatment plant (FTG-13) was in operation from 1951 until 1978. Ground scarring in the western portion of the installation represented potential disposal/burial sites. A fill area or disposal area, several ground-scarred areas, and a small arms range were identified in the north-central portion of the installation. Several areas in the southeastern portion of the installation were associated with disposal activity and included the following: a trench with nearby debris consisting of containers, a separate trench with debris, ground scarring with associated probable debris or rubble, piled objects or debris; piled multi-toned material; and a ground-scarred or disposal area. The SEBS (FTG-02, FTG-07, FTG-08, FTG-09, and FTG-10) are coincident with the areas of disposal activity. Six munitions storage bunkers were also located in the southeastern portion of the installation.

The photograph dated 1984 showed two separate disposal areas and ground scarring in the northwestern portion of the installation, coincident with FTG-01. Debris, rubble, and mounded material were visible in the disposal areas. The skeet range remained in the same location as in 1978 and a fill area or ground scarring was viewed immediately north of the range. Both water/sewage treatment plants remained in the western portion of the installation. A ground scar with a probable trench adjacent to it was on the eastern edge of the airstrip. Ground scarring was visible at several locations. Debris, crates or containers, and staining were near warehouses in the west-central portion of the installation. Two extensive fill areas or disposal areas with rubble and debris were present in the north-central portion of the installation coincident with FTG-01. Areas of liquid, staining, and a sump were among a group of buildings on the north side of the main rail yard, in the central portion of the installation; drums, containers, and equipment were in open storage areas south of the main rail yard. Areas in the southeastern portion of the installation associated with disposal activity included the following: two trenches (one with nearby mounded material and ground scarring and the other containing liquid or light-toned material), rubble or containers or debris and ground scarring in a wooded area and mounded material and piled debris. The six munitions storage bunkers remained in the southeastern portion of the installation.

The photograph dated 1988 showed that dark-toned staining or material was present near the warehouses in the west-central portion of the installation. Dark-toned material or staining and a separate area of staining were in the extreme portion of the installation, and areas of ground scarring were in the southwestern corner. The two extensive fill areas or disposal areas were still visible in the north-central portion of the installation. Ground scarring was visible in wooded

areas along the southern boundary of the installation, and a disposal area with rubble or debris was in the southeastern corner.

3.4 Sanborn Map Review

Historic Sanborn maps were not available for Fort Gillem.

3.5 Historical Topographic Map Review

Historical topographic maps of Fort Gillem used in the review included coverage from 1954, 1968, 1973, 1983, and 1993. Appendix D includes copies of the maps.

The topographic maps indicate that the elevation of the Property ranges from 855 feet above mean sea level (msl) in some streams channels to 971 feet above msl in the northern portion of the installation. A northeast – southwest trending ridge bisects the installation. The topographic maps provide a general indication of the chronology of building and road construction at Fort Gillem through time; however, the maps do not provide significant information to supplement the review and interpretation of aerial photographs presented in Section 3.3.

3.6 Records Review

This section presents the environmental records review.

3.6.1 Standard Environmental Record Sources

A search of state and federal environmental databases was undertaken for the Fort Gillem property and any listed sites within standard search distances. The findings of the search are summarized below (Table 3-3) and the complete search results are provided as Appendix E.

Table 3-3

Environmental Record Review Summary

Record(s) Source	Number of Sites Plotted	Minimum Search Distance (miles)
Federal NPL Sites	0	1.0
Federal CERCLIS List	1	0.5
Federal CERCLIS NFRAP List	2	Property and adjoining properties
Federal RCRA CORRACTS Facilities list	1	1.0
Federal RCRA non-CORRACTS TSD Facilities List	0	0.5
Federal RCRA Generators List	28	Property and adjoining properties

Record(s) Source	Number of Sites Plotted	Minimum Search Distance (miles)
Federal ERNS list	0	Property only
State NPL Equivalent	0	1.0
State CERCLIS Equivalent	0	0.5
State Landfill and/or solid waste disposal site lists	0	0.5
State leaking UST lists	16	0.5
State registered UST lists	26	Property and adjoining properties

- CERCLIS – Comprehensive Environmental Response, Compensation, and Liability Act Information System.
- CORRACTS – RCRA Corrective Action Sites.
- ERNS – Emergency Response Notification System.
- NFRAP – No further remedial action planned.
- NPL – National Priorities List.
- RCRA – Resource Conservation and Recovery Act.
- TSD – Treatment, storage, and disposal.

Fort Gillem was identified in the Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS), Resource Conservation and Recovery Act (RCRA)-large quantity generator (LQG), DOD, UST, Facility Index System, Georgia Tier 2, Federal Lands, and Georgia Spills Database searches performed by EDR.

A total of 56 other facilities were identified within the search radius of the Property that appeared on the public databases provided by EDR. In addition, 33 listings were not mapped due to poor or inadequate address information. A driveby of the surrounding area identified approximately 10 of these unplotted sites near or adjacent to the Property.

One of the listed CERCLIS sites, Sammons Septic Tank Service, historically has environmental concerns and has been identified to potentially have an environmental impact on Fort Gillem due to distance and gradient considerations. The specific environmental history of this site is addressed further in the CERCLIS database section below.

3.6.1.1 National Priorities List

The National Priorities List (NPL) is the EPA’s list of the most serious, uncontrolled or abandoned, hazardous waste sites identified for possible long-term remedial action under the Superfund program.

No NPL sites were identified within a 1-mile radius of Fort Gillem.

3.6.1.2 Comprehensive Environmental Response, Compensation, and Liability Information System

The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is an EPA database of known or suspected, uncontrolled or abandoned hazardous waste sites that the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to CERCLA.

Fort Gillem is listed in the CERCLIS database (site identification number 0401865, EPA Facility Identification Number GA0210020046). The database indicates a discovery reported on 12 February 1988 with a preliminary assessment completed on 15 August 1988. The database also indicates that the status of Fort Gillem is NFRAP. The Army, however, voluntarily initiated and continues to implement an IRP for hazardous waste sites identified in the installation assessment (USATHAMA, 1980). The IRP follows the guidelines of the Defense Environmental Restoration Program, which substantially follows the CERCLA process.

The CERCLIS database identifies two additional sites designated as NFRAP within a ½-mile radius of Fort Gillem. The two sites include the Sammons Septic Tank Service (5051 Courtney Drive) and Onyx Environmental formerly known as Solidtek, Inc. (5371 Cook Road). According to the assessment history for Sammons Septic Tank Service, a discovery was completed 5 May 1986 and a preliminary assessment was completed 22 September 1986. A site inspection was completed and archived on 10 January 1990. Sammons Septic Tank Service, in operation from 1950 to 1984, was located at 5051 Courtney Drive, southwest and approximately 1,000 feet upgradient of the 900 Area. All structures and evidence of this business have been removed and another business currently occupies the location. Information obtained during the records search suggests that potentially hazardous sludges were handled and disposed of on the property in the 1970s. Sammons Septic Tank Service had contracted with Oxford Chemical Company for chemical disposal in 1974. An eruption occurred on the Sammons Septic Tank Service property in 1976 that resulted in a release of smoke and fumes (Ebasco Environmental, 1994). Various chemicals, reportedly from the Oxford Chemical Company, had been buried approximately seven feet below ground surface. The GA EPD collected samples of the buried material and the EPA laboratory in Athens, Georgia analyzed the samples. Detected constituents included chloroform, carbon tetrachloride, toluene, xylene, tetrachloroethene, ethylbenzene, and trichloroacrylonitrile. No groundwater samples were collected.

It was decided on 29 March 1976 to recover the waste by excavation and dispose of the waste in a landfill. Recovered material included approximately 200 barrels, barrel remains, and associated contaminated soils. The GA EPD issued directives to Sammons Septic Tank Service

to stop any waste disposal. It should be noted that most of the surface drainage at this property flows to the west in a storm drain that empties in the local sewer system. However, some runoff may flow to Fort Gillem. Potential groundwater contamination caused by Sammons Septic Tank Service is a REC.

3.6.1.3 RCRA Corrective Action

RCRA Corrective Action Sites (CORRACTS) is a list of handlers with RCRA corrective action activity.

One CORRACTS site was identified within a 1-mile radius of Fort Gillem. The facility (Onyx Environmental, formerly known as Solidtek, Inc., 5371 Cook Road) is located downgradient of the Property, does not perform disposal activities, and therefore is currently not considered a REC.

3.6.1.4 RCRA Treatment, Storage, and Disposal Facilities

The RCRA program identifies and tracks hazardous waste from the point of generation to the point of disposal. RCRA notifiers are sites that have filed notification forms with the EPA, in accordance with RCRA requirements, regarding their generation, storage, transportation, treatment, or disposal of hazardous waste.

One RCRA treatment, storage, and disposal facility was identified within a ½-mile radius of Fort Gillem. The facility (Onyx Environmental, formerly known as Solidtek, Inc., 5371 Cook Road) is located downgradient of the Property, does not perform disposal activities, and therefore is not a concern.

3.6.1.5 RCRA Generators

The RCRA program identifies LQG and tracks hazardous waste from the point of generation to the point of disposal. LQG generate 1,000 kilograms or more per month of hazardous waste. RCRA notifiers are sites that have filed notification forms with the EPA, in accordance with RCRA requirements, regarding their generation, storage, transportation, treatment, or disposal of hazardous waste.

Two RCRA LQG facilities were identified within a ¼-mile radius of the Property. USA Fort Gillem (Hwy 54 Jonesboro Rd) is listed as a RCRA LQG. A total of 62 records of violations were found in association with this facility; however, it is currently in compliance.

The second facility listed as a RCRA LQG is Onyx Environmental, formerly known as Solidtek, Inc. The facility is located downgradient of the Property, does not perform disposal activities, and therefore is currently not considered a REC at this time.

The RCRA program identifies small quantity generators (SQG) and tracks hazardous waste from the point of generation to the point of disposal. SQG generate more than 100 kilograms but less than 1,000 kilograms per month of hazardous waste. RCRA notifiers are sites that have filed notification forms with the EPA, in accordance with RCRA requirements, regarding their generation, storage, transportation, treatment, or disposal of hazardous waste.

A total of 26 RCRA SQG facilities were identified within a ¼-mile radius of the Property. Sites listed in the RCRA SQG database are as follows:

Facility	Address
USA Fort Gillem	Hwy 54 Jonesboro Road
Mack Trucks, Inc.	4570 Moreland Avenue
Thomas Built Buses, Inc.	4788 Highway 42
Whiteford Trucklines	4480 Moreland Ave.
ABF Motor Freight Systems	4700 GA Hwy 42
Pep Boys #110	4853 Jonesboro Road
Firestone Store #73	4916 Jonesboro Road
Promotive, Inc.	4906 Jonesboro Road
Consolidated Freightways	2590 Campbell Boulevard
Fast Freight	5161 Highway 42
American Freightways, Inc.	2664 Campbell Blvd
Russell Printing	1123 Forest Parkway
Forest Parkway, LLC	5195 Highway 42
Amoco Smart Mart	5195 Jonesboro Road
Jiffy Lube #748	5190 Jonesboro Road
Prime Equipment #418	1789 Forest Parkway
Schneider National Bulk Carriers	1365 Forest Parkway Lake
Jerry's One Hour Cleaners	5204 Jonesboro Road
Waste Management of Atlanta	1571 Burks Drive
Steve Rayman Automotive	1390 Forest Parkway
Mold-Tech SE	5195 North Lake Drive
Atlantic & Southern Equipment	1642 Forest Parkway
Ornamental Security, Inc.	1716A Forest Pkwy
Create-A-Surface	1708B Forest Parkway
Prime Equipment Number 418	1789 Forest Parkway
Reynolds-Warren Equipment Company	1786 Forest Parkway
Rylander & Son Pumping & Sewer	5353 North Lake Drive
Onyx Environmental, formerly known as Solidtek, Inc	5371 Cook Road
Advantage Plus Automotive Parts	5376 North Parkway

Fort Gillem (102 Hood Avenue) was listed as an orphan site in the EDR report. No information was provided for the Fort Gillem facility. Violations were found at four of the above facilities (Mold-Tech SE, Atlantic & Southern Equipment, Ornamental Security Inc., and Advantage Plus Automotive Parts) but compliance has been achieved at each of facilities. Due to the small quantity of hazardous materials located at the above listed facilities and the facility's regulatory status, none are currently considered RECs at this time.

3.6.1.6 Emergency Response Notification System

The Emergency Response Notification System (ERNS) is a national database used to collect information of reported releases of oil and hazardous substances. The database search for ERNS sites was limited to Fort Gillem.

Fort Gillem was not listed in the ERNS.

3.6.1.7 Hazardous Materials Incident Report System

The Hazardous Materials Incident Report System (HMIRS) contains hazardous material spill incidents reported to the U.S. Department of Transportation. The source of this database is the EPA.

A total of 27 HMIRS sites were identified within a ½-mile radius of Fort Gillem. The site names were not reported; however, one facility is listed as 4720 Moreland Avenue, the following 25 facilities are listed as 4700 GA Hwy 42 (i.e. Moreland Avenue), and the last address is listed as 5161 Highway 42. No records of violations were found in association with these facilities and the facilities are downgradient of Fort Gillem. The facilities are currently not considered RECs at this time based on gradient and regulatory status.

3.6.1.8 Department of Defense Sites

Department of Defense Sites (DOD) sites consist of federally owned or administered lands, administered by the DOD, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

One DOD site was identified within a ½-mile radius of Fort Gillem. It is listed as Fort Gillem Heliport (no address listed) and was formerly located in the western portion of Fort Gillem. No records of violations were found in association with this facility, and it is currently not considered a REC at this time, based on regulatory status.

3.6.1.9 Section 7 Tracking System

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended, requires all registered pesticide producing establishments to submit a report to the EPA by 1 March each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

One Section 7 Tracking System site was identified within a ½-mile radius of Fort Gillem. It is listed as BOC Gases (1331 Metcalf Road). No records of violations were found in association with this facility. Due to the facility's regulatory status, the facility is currently not considered a REC at this time.

3.6.1.10 PCB Activity Database System

The PCB Activity Database System identifies generators, transporters, commercial storers, and/or brokers and disposers of PCBs who are required to notify the EPA of such activities. The source of this database is the EPA.

Two PCB Activity Database System sites were identified within a ½-mile radius of Fort Gillem. They are listed as Atlantic & Southern Equipment (1642 Forest Parkway); and Onyx Environmental, formerly known as SolidTek, Inc. (5371 Cook Road). No records of violations were found in association with these facilities and they are currently not considered a REC at this time.

3.6.1.11 Other Federal ASTM Supplemental Records

No properties were identified by EDR within the Federal search radius for the following supplemental federal records: CONSENT, ROD, MLTS, MINES, FUDS, INDIAN RESERV, UMTRA, US ENG CONTROLS, UST INST CONTROL, US BROWNFIELDS, ODI, RAATS, TRIS, TSCA, ICS, and FTTS.

3.6.2 State Government Databases

3.6.2.1 Underground Storage Tanks

The State of Georgia UST database contains an inventory of registered USTs. A total of 26 UST facilities were identified within a ¼-mile radius of Fort Gillem. Sites listed in the UST database are as follows:

Facility	Address
International Processing B, Inc.	4413 Old Tanners Church
Whiteford Trucklines	4480 Moreland Ave.

Exxon Food Mart	2360 Anvil Block Road
Pep Boys/Manny Moe & Jack	4853 Jonesboro Road
Rainbow Muffler	4832 Jonesboro Road
J&Z, Inc.	4806 Jonesboro Road
Goodyear Auto Service Center #601	4778 Jonesboro Road
Firestone Store #73	4916 Jonesboro Road
Quick Stop Food Mart	4962 Jonesboro Road
Forest Park & Main Street Wrecker	4999 Courtney Drive
Golden Gallon #59	1151 Main Street
Super Service, Inc.	2665 Campbell Road
Consolidated Freightways	2590 Campbell Boulevard
American Freightways, Inc.	2664 Campbell Blvd
Clayton Co. Water Authority/Forest Park	1101 Forest Avenue
Forest Parkway, LLC	5195 Highway 42
Amoco Smart Mart	5195 Jonesboro Road
Jiffy Lube #748	5190 Jonesboro Road
Atlanta-South Hauling	1571 Burks Drive
BP Food Store	5210 GA Hwy 42
Dixie Numerics, Inc. Vaughn Cons	5105 North Lake Drive
Phillip Services/Atlanta Inc.	1642 Forest Parkway
Prime Equipment #418	1789 Forest Parkway
International Bakerage, Inc.	1696 Joy Lake Road
Lake City Auto Electric	5498 Jonesboro Road
ABF Motor Freight Systems	4700 GA Hwy 42

There are also seven UST orphan (unmapped) sites listed in the EDR report. They are listed as USF Holland (4700 Moreland Avenue); Buddy’s Convenience Store (1540 Cedar Grove Road); Atlanta Processing (4413 Tanners Church); Phillips 66 (5635 Hwy 42); Texaco Food Mart (6551 Hwy 42); Pamir Development Inc. (511 Old Dixie Road); and AAFES PX Gas Station (2125 Hood Avenue).

No records of violations were found in association with these facilities and pose no concern to Fort Gillem.

3.6.2.2 Leaking Underground Storage Tanks

Leaking Underground Storage Tank (LUST) records contain an inventory of reported incidents involving LUSTs. Twelve of the LUST sites are listed as having a No Further Action (NFA) status and are as follows:

Facility	Address
International Processing B, Inc.	4413 Old Tanners Church
Whiteford Trucklines	4480 Moreland Ave.
Pep Boys/Manny Moe & Jack	4853 Jonesboro Road

Rainbow Muffler	4832 Jonesboro Road
J&Z, Inc.	4806 Jonesboro Road
Goodyear Auto Service Center #601	4778 Jonesboro Road
Firestone Store #73	4916 Jonesboro Road
Forest Park & Main Street Wrecker	4999 Courtney Drive
Consolidated Freightways	2590 Campbell Boulevard
American Freightways, Inc.	2664 Campbell Blvd
Amoco Smart Mart	5195 Jonesboro Road
BP Food Store	5210 GA Hwy 42
Dixie Numerics Inc. Vaughn Cons	5105 North Lake Drive
International Bakerage, Inc.	1696 Joy Lake Road
Lake City Auto Electric	5498 Jonesboro Road

The 4 LUST sites that do not have “No Further Action” status are either downgradient or crossgradient to Fort Gillem. The 4 sites are as follows:

Facility	Address
ABF Motor Freight Systems	4700 GA Hwy 42
J&Z, Inc.	4806 Jonesboro Road
Amoco Smart Mart	5195 Jonesboro Road
BP Food Store	5210 GA Hwy 42

Due to the regulatory status, distance, or gradient, these LUST sites currently pose no immediate concern to Fort Gillem.

There are seven LUST orphan sites listed in the EDR. The status for four of these sites is listed as NFA. They are listed as U.S. Army Fort Gillem (307 Park Avenue); AAMCO Transmission/Lester Nelson (5460 Jonesboro Road); Chevron Food Mart (6459 South Main Street); and Buddy’s Inc. #22/Gate #215 (6800 South Main Street). The status of O.H. Adamson (5192 GA Hwy 42) is listed as “Clean-up Initiated.” The status of Fort Gillem Building 606 (606 North Avenue) is listed as “Monitoring Only.” The status of Circle M Food Shop #35 (6629 South Main Street) is listed as “NFA-Monitoring Only.”

There also were seven additional LUST sites found on the GA EPD website. These sites were also shown on the EPD UST list of facilities. All of these sites are closed sites located on the Fort Gillem property. The status of four (Buildings 101, 111, 312, and 931) of these sites is listed as NFA. The status of the remaining three sites (Building 504, 610, and T-926) is listed as “Clean-up Initiated.”

The tanks located on the Fort Gillem property are discussed in Section 5.4.

3.6.2.3 Hazardous Site Inventory

This database contains records that are the state equivalent to CERCLIS. They show a list of priority hazardous sites that are planned for cleanup.

There are no Hazardous Site Inventory sites located within a 1-mile radius of Fort Gillem.

3.6.2.4 Solid Waste Facilities/Landfill Sites

Solid Waste Facilities/Landfill Site records typically contain an inventory of solid waste disposal facilities or landfills in the state. Depending on the state, these might be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D, Section 4004 criteria for solid waste landfills or disposal sites. The state database maintains an inventory of the solid waste facilities in the state.

There are no Solid Waste Facilities/Landfill Sites within a ½-mile radius of the subject property.

3.6.2.5 Other State ASTM Supplemental Records

Georgia Non-Hazardous Site Inventory. The Non-Hazardous Site Inventory database contains property listings that have reported contamination of soil or groundwater under the Georgia Hazardous Site Response Act. These sites were not placed on the Georgia Priority List because their hazard evaluation scores did not exceed the thresholds levels established for sites posing an imminent threat to health or the environment.

There are four Georgia Non-Hazardous Site Inventory sites located within a 1-mile radius of Fort Gillem. They are listed as follows:

Facility	Address
Rainbow Muffler	4832 Jonesboro Road
Azar Property	Hwy 85
Sammons Septic Tank Service	5051 Courtney Drive
Lake City Shopping Center	5204 Jonesboro Road

A contaminant of tetrachloroethene was reported as being released at Rainbow Muffler; however, no date was reported. This site appears to be crossgradient and is not a concern to Fort Gillem. A date of 1 May 1994 was reported for Azar Property; however, the contaminants were classified as “no release”. A date of 1 May 1994 was also reported for Sammons Septic Tank Service; however, the contaminants were also classified as “no release.” A date of 1 April 1996 was reported for Lake City Shopping Center; however the contaminants were not reported.

Georgia Spills Database. The Spills Database comes from the Georgia Department of Natural Resources and is an Emergency Response Incident Reporting System for oil and hazardous material spill and releases.

There are four Georgia Spills Database site located within a 1-mile radius of Fort Gillem. The facilities listed in the Georgia Spills Database are as follows:

Facility	Address
Fort Gillem	2053 North D Avenue
Consolidated Freightways	2590 Campbell Boulevard
Jones Truck Line	5161 Highway 42
Delta Express	5161 Highway 42

A spill was reported at the Fort Gillem facility on 13 February 2003. Approximately 10 gallons of diesel fuel spilled out of a filter and entered a storm drain in the parking lot of building 514. No other information is provided regarding the spill. Three other facilities currently pose no concern to Fort Gillem due to their distance or their topographic position.

Dry Cleaners. This database shows a listing of dry cleaners. One dry cleaner site was identified within a ½-mile radius of Fort Gillem. It is listed as Jerry’s One Hour Cleaners (5204 Jonesboro Road). No records of violations were found in association with this facility, and currently the facility is not a REC.

Tier 2. The Tier 2 database list facilities which store or manufacture hazardous materials and submit a chemical inventory report.

One Tier 2 site was identified within a ½-mile radius of Fort Gillem. It is listed as Fort Gillem (2053 North D Avenue). No violations or issues were reported for this facility.

No other properties were identified by EDR within the state ASTM search radius for the following supplemental state or local records: HIST LF, INST CONTROL, BROWNFIELDS, and AIRS.

3.6.3 Additional Record Sources

Reasonably accessible Army environmental documents, district records, and aerial photographs of the property were reviewed to investigate land uses at the Property. Installation personnel

were contacted to learn about historic uses of buildings and lands on the Property. Available information on past land uses and their potential impacts was assessed. Other documents and resources of historical importance that were used include the following:

- Readily available records and files documenting where hazardous materials are stored and used on the property (a summarized list is included in Chapter 5.0).
- Proof of ownership documentation via acquisition deeds and property maps were obtained through Fort McPherson's Real Property Division. This inquiry included a search for recorded deeds, leases, mortgages, easements, and other appropriate documents. A copy of the proof of ownership documentation is presented in Appendix F.
- Files at the USACHPPM were reviewed for documents addressing human health matters.
- Environmental documents and files at the Army Environmental Center.

3.7 Interviews

Individuals with historic or current knowledge of Fort Gillem were interviewed to provide information concerning environmental conditions at the installation. Personnel from the following offices were interviewed:

- Directorate of Public Works (DPW) Environmental Division – Air Quality
- DPW Environmental Division – IRP/Cleanup
- DPW Environmental Division – UST/Asbestos
- DPW – Natural Resources
- DPW – Maintenance
- DPW - Engineering
- DPW – Real Property
- DPW - Historic Architect
- Fort McPherson Museum
- Installation Management Agency Southeast Regional Office
- U.S. Army Corps of Engineers (USACE) – Savannah District
- Georgia EPD
- U.S. Criminal Investigations Command
- Army and Air Force Exchange Service.

The interviews included topics of general environmental interest and specific areas of interest identified during the records review and visual site inspection. Copies of the interview reports are included in Appendix G. Pertinent information regarding environmental impacts is included in Chapter 5.0 of this report.

3.8 Data Management

The environmental conditions at the installation, developed as described above, were evaluated facility wide, and findings were compiled in hard copy and in electronic format. The majority of information used in the evaluation of the environmental condition is included in the appendices of this report. In addition, all electronic information used in the production of this document is provided in a separate CD. Files were compiled by the AEC in the summer of 2005. Newly collected information has been added to this repository. All electronic data items are listed in a Microsoft Excel[®] spreadsheet containing the descriptive name of the item as well as the electronic filename.

4.0 Property Description

The environmental conditions at the installation, developed as described above, were evaluated facility wide, and the findings are presented in Chapter 5.0. This chapter summarizes information on past and present land use and the nature of major processes and operations. A comprehensive list of buildings/sites and associated use, processes, and activities is in Appendix A.

4.1 Installation Location and Description

Fort Gillem is located in Forest Park, Georgia, a suburb south of Atlanta in Clayton County, between Georgia Highway 54 (Jonesboro Road) and U.S. Highway 23 (Moreland Avenue). It occupies 1,427 acres and its dimensions are approximately 2.5 miles east to west and approximately 1.5 miles north to south. The geographic location is latitude 33 degrees, 35.5 minutes north and longitude 84 degrees, 19.7 minutes west. Figure 1 is a site location map showing Fort Gillem and the immediate surrounding area.

Fort Gillem includes 176 buildings that were constructed as early as 1941. Residential development bounds Fort Gillem to the north. Mixed commercial and industrial development bounds the installation along Moreland Avenue to the east and Jonesboro Road to the west and southwest. A mixture of residential, commercial, and industrial development bounds Fort Gillem to the south.

4.2 Historic Land Use

When Fort Gillem was constructed, the land was largely undeveloped and consisted of rolling hills covered with vegetation and cleared areas used for agricultural purposes. The natural topography and drainage were altered during construction of the installation and significant tracts of vegetation were cleared. The 1939 aerial photographs reviewed were taken before the construction of Fort Gillem and showed the land developed for agricultural purposes. There is no evidence of any prior land use that would result in environmental liabilities or issues that require resolution. A title abstract is provided in Appendix F.

4.3 Facility History

Fort Gillem dates to late 1940 when Congress appropriated funding for the construction of two installations, the Atlanta Quartermaster Depot and the Atlanta Quartermaster Motor Base, and selected a site near Conley, Georgia. The Atlanta Quartermaster Depot was constructed to correct the inadequacy of the depot that then existed in a Candler Warehouse in Atlanta. Construction started in 1941 and both installations were completed in 1942. On 1 April 1948,

the depot and motor base were merged and renamed the Atlanta General Depot. From 1952 to 1956, the former Atlanta Motor Base portion of the depot operated as an Ordnance Automotive School. In 1959, the Morris Army Airfield was constructed; it was used until the mid-1970s.

In 1962, the installation name was changed to the Atlanta Army Depot. On 18 July 1973, responsibility for the Atlanta Army Depot was transferred from the Army Materiel Command (AMC) to FORSCOM. The Atlanta Army Depot was deactivated in 1974 and renamed Fort Gillem in honor of Lieutenant General Alvan C. Gillem, Jr., who began his career as a private at Fort McPherson in 1910 and retired 40 years later as commanding general of the Third U.S. Army. Administrative control of the Installation was transferred to Fort McPherson. The installation was active through World War II, the Korean War, the Berlin Crisis, the Vietnam War, and Operation Desert Shield/Desert Storm during the Persian Gulf conflict. DoD’s BRAC Commission included Fort Gillem in its 2005 recommendations for closure. Figure 2 is a site map of Fort Gillem.

Important events in the facility’s development, administration, and mission are summarized in Table 4-1:

Table 4-1
Chronology of Fort Gillem

Year	Description
1940	Congress appropriates funding for the construction of the Atlanta Quartermaster Depot and the Atlanta Quartermaster Motor Base.
1941	Construction of both installations begins.
1942	Both installations open by the end of the year.
1948	The Atlanta Quartermaster Depot and the Atlanta Ordnance Depot were consolidated as the Atlanta General Depot.
1952 1956	The former Atlanta Motor Base portion of the depot operated as an Ordnance Automotive School.
1957	Morris Army Airfield is constructed.
1962	Installation is renamed the Atlanta Army Depot.
1967	A logistical training battalion was activated for training during the Vietnam War
1973	Responsibility for the Atlanta Army Depot transferred from AMC to FORSCOM.
1974	The Atlanta Army Depot is deactivated and renamed Fort Gillem.
2005	The BRAC Commission recommends closure of Fort Gillem.

4.3.1 Operational History

Fort Gillem's primary missions were training and materiel supply through World War II, the Korean War, the Berlin Airlift, the Cuban Crisis, the Vietnam War, and Operation Desert Shield/Desert Storm during the Persian Gulf conflict. The installation was responsible for providing the Army with weapons and equipment, research and development, procurement, production, storage, distribution, inventory management, maintenance, and disposal of surplus and waste materials during both peacetime and wartime. In 1967, a logistical training battalion was activated at the installation to train men and women for assignment to military depots in Vietnam and to the Medical Service Corps.

Since the installation was renamed Fort Gillem in 1974, it has been a satellite installation of Fort McPherson. Fort Gillem supports FORSCOM readiness missions and is home for many FORSCOM and Fort McPherson activities. The Eastern Distribution Region of the AAFES uses approximately 60 acres for storage and occupies approximately 2.7 million square feet of warehouse space. Fort Gillem currently provides warehouse and office space to also the Federal Emergency Management Agency (FEMA) in support of its disaster relief activities. A map of the FEMA area and the Army Reserve Enclave is included as Figure 3.

4.3.2 Process Descriptions (Industrial Facilities Only)

Table 4-2 summarizes industrial operations identified in the 1980 Installation Assessment, the 2003 Storm Water Pollution Prevention and Management Plan, and the VSI.

Table 4.2 redacted.

Other activities known to have occurred at Fort Gillem that may have used hazardous substances or petroleum products include the following:

- Radiological calibration sources, electron tubes and radium compasses stored and potentially disposed.
- Ore storage
- Coal pile in the 900 Area and one other site visible in historic photos

Information regarding radioactive material at Fort Gillem is included in Section 5.9. Further information regarding ore storage and the coal piles are included in Section 4.4.4.

4.3.3 Occupancy, Lease, and Easement History

The 1980 Installation Assessment identified a number of tenant and lessee organizations as follows:

Military organizations

- Headquarters, U.S. Army Readiness Region IV
- Readiness Group Atlanta
- Headquarters, U.S. Army Southeast Region Recruiting Command
- Headquarters, U.S. Army Third Region Criminal Investigation Command
- 547th Ordnance Detachment Control Center (Explosive Ordnance Disposal [EOD])
- 13th Ordnance Detachment (EOD)
- 902nd Military Intelligence Group, Atlanta Field Office
- U.S. Army Special Operations Pictorial Detachment

- U.S. Army Computer System Command Field Agency
- U.S. Army Facility Engineering Support Agency Detachment 2
- Worldwide Military Command and Control System
- Computerized Movement Planning and Status System
- Equipment Concentration Site/Maintenance Branch
- 818th Hospital Center
- 2nd Maneuver Training Command
- 601st Engineering Platoon
- U.S. Coast Guard Reserve Training
- Atlantic Regional Storage Management Office, Eastern Area, Military Traffic Command
- Defense Logistics Agency
- Defense Contract Administration Services Management Area, Quality Assurance Atlanta Operations Branch 1
- Inspector General Regional office, Southeast Area
- Property Disposal Office
- U.S. Army Materiel Development and Readiness Command, Security Support Activity
- Communications and Electronics Materiel Readiness Command, Logistics Assistance team, Troop Support and Materiel Readiness Command, Field Service Activity
- Army and Air Force Exchange Service, Eastern Distribution Region
- U.S. Army Commissary
- USACE, Atlanta Area Office, Savannah District.

Nonmilitary tenant organizations, including those only using storage space, were the following:

- FEMA, Forest Park Strategic Storage Center

- U.S. Postal Service Warehouse
- Federal Aviation Administration, Electronic Engineering Branch
- Fort Gillem Credit Union
- Clayton County Training Center
- Metropolitan Atlanta Rapid Transit Authority
- Veterans Administration
- Federal Bureau of Investigation
- Boy Scouts of America
- City of Forest Park.

The current tenant and lessee organizations are identified as follows:

- First U.S. Army
- Third U.S. Army
- Fifth U.S. Army
- 4th Brigade, 87th Division
- Army and Air Force Exchange Service (AAFES)
- Directorate of Installation Support (DIS)
- Directorate of Morale, Welfare, and Recreation
- Department of Public Works (DPW)
- U.S. Army Garrison
- United States Army Test, Measurement, and Diagnostic Equipment (TMDE) Activity
- U.S. Army Criminal Investigation Command (CID)
- U.S. Army Reserve Command
- 357th Combat Support Brigade
- 81st Regional Readiness Command [formerly the 81st Regional Support Command (RSC)]
- Georgia National Guard
- National Guard Bureau
- Directorate of Installation Management (DOIM)
- U.S. Army Forces Command (FORSCOM)
- Defense Commissary Agency
- U.S. Army Recruiting Command
- Defense Reutilization and Marketing Service
- U.S. Coast Guard
- Department of Homeland Security
- Federal Emergency Management Agency (FEMA) Logistics Center- Atlanta
- U.S. General Services Administration (GSA)
- AMEDD Det, 2d Recruiting BDE
- Military Entrance Processing Command
- Explosive Ordnance Disposal
- 52d Ordnance Group
- Military Intelligence Reserve Center, Ft. Belvoir
- Southeast Army Reserve Intelligence Support Center
- U.S. European Command Joint Analysis Center

- Department of Defense (DOD)

Contractors/Other Tenants

- Veterans Administration
- Associated Credit Union
- United States Postal Service
- Periodical Management Group (PMG) International Division
- Red Cross (Warehouse Only)
- Ginn Group (Electronics)
- Intl Technology Corp.

The Wherry Housing is leased to a private developer for Section 8 housing in the southeast corner. The buildings at Gillem have 125 “apartments” with various floor plans. The lease was written in October of 1950 and will expire in October 2025.

4.3.4 Range Operations

There are 11 active or inactive operational ranges at Fort Gillem (Malcolm Pirnie, Inc. 2006), as listed in Table 4-3.

**Table 4-3
Operational Ranges at Fort Gillem**

Range	Status	Acreage	Current use	Historic Use
Airstrip	Active	10.41	Physical training track and rotary wing landing pad	Airstrip
Training Area 1	Active	132.87	Light forces and maneuver/training activities	Former Skeet and Trap Range; waste burial (FTG-01)
Training Area 1A	Active	42.89	Light forces and maneuver/training activities	Sewage Treatment Plant (FTG-13)
Training Area 2	Active	84.62	Light forces and maneuver/training activities	Former Pistol Range Waste burial (FTG-01)
Training Area 2A	Active	34.55	Light forces and maneuver/training activities	
Training Area 2B	Inactive	21.06	Light forces and maneuver/training activities	Waste burial (FTG-01)

Training Area 3	Active	26.36	Light forces and maneuver/training activities	Recreational Park
Training Area 4	Active	37.42	Light forces and maneuver/training activities	Waste burial (FTG-08 and FTG-09)
Training Area 5	Active	44.56	Light forces and maneuver/training activities	Waste burial (FTG-02 and FTG-07)
Training Area 6	Active	16.1	Light forces and maneuver/training activities	Military Police Use
Training Area 7	Inactive	22.71	Light forces and maneuver/training activities	

Source: Historical Records Review (April 2006).

The range inventory lists a significant variety of munitions as having been used at the Fort Gillem training areas. However, installation staff believe the list is of those munitions that were authorized for use, not those that have been used. Their belief is that munitions have been restricted to the following:

- .22 caliber
- .38 caliber
- .45 caliber
- 5.56 caliber
- 7.62 caliber

Of the 11 identified operational ranges at Fort Gillem, only 2 had the history of munitions usage. Training Area 1 contained a former skeet and trap range that was constructed in approximately 1974 and used for recreational shooting. It was located on the southeast portion of Training Area 1, just north of the former airstrip in the southwestern portion of the North Landfill Area (FTG-01).

Training Area 2 contained a former Pistol Range that was used for small arms training only. The Pistol Range was located within the North Landfill Area (FTG-01) near the northern border of the landfill just east of the Eastern Sewage Treatment Plant (FTG-14). Soil samples were collected from the Pistol Range area in the mid 1990s and these data will be included in the baseline risk assessment for the North Landfill Area, which is currently being prepared. There are no indications of arms usage at the remainder of the training areas.

Ordnance was stored in buildings 321 through 326 and 739 at Fort Gillem. There are no documented releases or recognized environmental conditions associated with these buildings. A follow-up inspection will be conducted by Fort Gillem's safety officer to decommission the buildings.

A controlled indoor weapons range was formerly located in Building 213. The range was in operation from 1981 to 2005. Bullets were fired to analyze and link shells from crime scenes to a specific weapon.

4.4 Installation Utilities (Historic and Current)

4.4.1 Water Systems

Water is supplied by Clayton County from off site. A water quality survey was conducted in 1989 and some exceedances of lead standards were noted in Buildings 710 and 715. Consequently, a system upgrade was recommended after a drinking water consultation in 1994. Given the age of the buildings and the water distribution system, it is likely that lead problems arise in part from the plumbing system. Aesthetic complaints continue to the present, including complaints of reddish water from the taps. Complaints are addressed by the preventative medicine group. A new water system was installed in 1997. The new pipes are constructed of PVC. Maps depicting the domestic water system are provided on a separate CD.

A 2004 Environmental Program Requirements report for inspection and cleaning of water tanks indicated the three-year obligation under the Safe Drinking Water Act had not been complied with for 10 years.

The existing fire suppression system was installed in 1941 and is constructed of lead cast iron pipe. Several fire hydrants on the installation have been replaced within the last 10 years. Figure 4 depicts the fire suppression system for Fort Gillem.

4.4.2 Industrial and Sanitary Sewers and Treatment Plants

The sanitary sewer system is constructed of cast iron pipe where it operates as a force main or where there is shallow bedrock.

A 1997 USACHPPM inspection noted that some operations were discharging wastewater to storm sewer without permit. The sanitary sewers could have deposited persistent contaminants at storm water outfalls. The latter situation would have raised more temporary concerns with respect to bacteria and aesthetic impacts.

There were three different historic treatment plants on the Property, the oldest of which was closed in the 1950s. The other two treatment plants were closed in the 1970s (FTG-03 and FTG-13). Both utilized trickling filter technology. The more recent plant had a permitted daily maximum flow of 3.1 million gallons per day and a largest monthly flow recorded (1/03) of 5.9 million gallons. All treatment is now conducted off-site by Clayton County.

The sanitary sewer utilities for Fort Gillem are depicted on Figure 5.

4.4.3 Storm Water System

Up until 1971, 400 Area industrial wastewater was discharged into the storm water sewer. Currently there is a 2003 Storm Water Pollution Prevention and Management Plan in place. The plan was approved in 1994, updated in 1998, and then updated again in 2003. Some operations have historically discharged wastewater to storm drains without permits. This could have deposited recalcitrant (i.e., slow to degrade) contaminants at storm water outfalls. Eighteen outfalls are located on the installation and six outfalls are associated with industrial activities. Given current operations, outfalls will be subject to residues from various operations as follows:

- Vehicle Maintenance – Outfalls 249, 228, 183, and 129
- Fueling – Outfalls 190, and 183
- Hazardous waste storage – Outfall 86
- Materials storage – Outfall 129
- Sandblasting – Outfall 183.

When combined with past connections with industrial effluents, the sediments at the outfalls may be impacted by deposition of metals and semivolatile organic compounds constituting a REC.

The storm water utilities for Fort Gillem are depicted on Figure 6.

4.4.4 Electrical System

Power is supplied by natural gas and electrical lines.

Currently, the installation is primarily heated with natural gas. At one time, heating was provided through a steam plant that was powered by coal. The analysis of historic aerial photos identified two distinct coal piles. The first appears in the central portion of the Property near the eastern boundary in the 1950 photo and is no longer in existence by 1958. The second is near the former incinerator at the western boundary of the Property and appears in a 1950 photo and remains through 1972, although it appears to move around in the general vicinity. A third pile located in the central portion of the Property was interpreted to be a reserve ore pile, not coal. It

was present in the 1950 photo, but after 1958 it appears to be revegetating (1981 EPA Photo Interpretation Report).

An air propane mixing system is used at Fort Gillem as a secondary fuel source.

The electrical utilities for Fort Gillem are depicted on Figure 7.

4.5 Environmental Setting – Natural and Physical Environment

The Atlanta area is located within the Piedmont Physiographic Province, a broad upland developed on deformed Late Precambrian and Paleozoic metamorphic and igneous rocks that is situated between the Blue Ridge Physiographic Province to the northwest and the Coastal Plain Physiographic Province to the southeast. The topography of the province varies from rolling to rugged with elevations ranging from approximately 2,000 msl to 500 feet msl or less (Brackett, et al., 1991).

4.5.1 Climate

The Fort Gillem area is located in the temperate zone of the northern hemisphere, with climatic characteristics typical of that region. Four distinct seasons occur, with relatively mild winters and warm, humid summers. Spring is typically short in duration, with frequent storms; autumn commonly includes extended periods of mild and sunny weather. The winter and spring tend to be the wettest portions of the year and the autumn the driest. Heavy thunderstorms accompanied by high winds are common in summer months. Snow in measurable quantities is rare, although ice storms occur often during the winter. Weather systems generally move from west to east across the area, and the relative humidity averages 60 percent.

The mean monthly temperature ranges from 42 degrees Fahrenheit (°F) in January to 79 °F in July, with an annual mean temperature of 61 degrees °F. Although temperatures are relatively mild throughout the year, extreme values of 102 °F in July and -4 °F in January have been recorded. The area experiences an average of 58 days per year with freezing temperatures. The average annual precipitation is 48 inches and the average growing season is 233 days (IT Corporation [IT], 2001a).

4.5.2 Topography

The topography at the Property is gently rolling, with surface elevations ranging from 855 feet msl to 971 feet msl. A northeast – southwest trending ridge bisects the installation and acts as a groundwater and surface water divide. Data collected across Fort Gillem during various environmental investigations suggests a close correspondence between topography and the top of

the bedrock surface. The local direction of groundwater flow across the Property similarly corresponds with topography.

4.5.3 Surface Water Hydrology

The Property includes two major drainage basins separated by the northeast – southwest trending ridge that bisects the installation. Storm drains and drainage ditches carry storm water and runoff to the streams that comprise the two basins. Surface runoff from the northern portion of the Property flows north and northeast through streams that discharge into tributaries of Conley Creek. Surface runoff from the southern portion of the Property flows south and southeast through streams that discharge to tributaries of Upton Creek, which merges with Big Cotton Indian Creek southeast of Fort Gillem.

The drainage basin in the southern portion of the Property also includes two surface water bodies, Marchman Lake and Stephens Lake. The two lakes are both man made and the surface area of the lakes totals approximately 5.6 hectares (USATHAMA, 1980). Two streams in the southeastern portion of the Property, one of which drains Stephens Lake, discharge just south of the Property into Joy Lake, a man-made recreational lake.

The streams at the Property flow perennially but at relatively low flow rates. Maximum flow rates measured in the southeastern portion of the installation (Foster Wheeler Environmental Corporation [Foster Wheeler], 1996a) were approximately 0.2 to 0.3 cubic feet per second (cfs). Stream flow measured during dry conditions in 1994 from two streams in the northern portion of the installation was 0.162 cfs and 0.179 cfs, likely reflecting groundwater seepage.

Conley Creek flows to northeast and joins the South River approximately 10 miles northeast of Fort Gillem. Big Cotton Indian Creek flows to the southeast and also joins the South River. The South River, in turn, flows to the south - southeast and joins the Ocmulgee River, which joins the Altamaha River that discharges to the Atlantic Ocean near Brunswick, Georgia.

4.5.4 Geology

The Piedmont of northern Georgia consists of igneous and metamorphic rocks that extend to an unknown depth below land surface. The geologic history of the rocks is complex and includes multiple episodes of folding, faulting, and metamorphism. Isotopic dating indicates that the rocks are Late Precambrian to Early Paleozoic in age and record several metamorphic events. Faults are commonly used as defining boundaries at the margins of and within the Piedmont. The Brevard Zone, northwest of the Property, subdivides the Piedmont into two portions,

commonly called the northern Piedmont and the southern Piedmont (McConnell and Abrams, 1984).

The Big Cotton Indian Formation of the Atlanta Group underlies all of the Property (McConnell and Abrams, 1984) and consists primarily of massive biotite-plagioclase gneiss. Higgins and Atkins (1981) named the Atlanta Group and it includes bedrock units south of the Brevard zone. The Big Cotton Indian Formation occurs in a broad area that coincides with the trough of a large regional structure, the Newnan-Tucker synform. The type location of the Big Cotton Indian Formation is approximately 1 mile southeast of the Property near Big Cotton Indian Creek. In addition to biotite-plagioclase gneiss, the formation also includes intercalated biotite-muscovite schist and mafic intervals. Coarse-grained, nearly pegmatitic-granitic intervals constitute a minor portion of the sequence.

Examination of bedrock outcrops and core from drilling indicates that fracture sets generated by tectonic activity or erosion (i.e., unloading) are not well developed. The fabric of the bedrock results in fractures and partings coincident with foliation. The foliation is a consequence of abundant phyllosilicates, dominated by biotite, in the bedrock. The fractures and partings coincident with foliation represent the primary ground water migration pathway in the bedrock (IT, 2001a).

Data from drilling across the Property shows that the bedrock surface is highly irregular and has a correspondence with surface topography. Bedrock highs result in significant local variation in groundwater flow direction. The maximum depth to bedrock observed at the Property is approximately 100 feet below ground surface.

The regolith, or overburden, mantles the bedrock and consists of soil, fill, alluvium, and saprolite. The overburden varies in thickness across the installation, from as little as 4 feet to over 50 feet, with a maximum of nearly 100 feet. The uppermost material includes native soil that is generally a mixture of silt, clay, and sand. Fill is a component of this interval and consists of native soil that was reworked during cut-and-fill activities associated with construction and historical waste burial. Alluvium occurs in active and former stream channels and is a sand and silt mixture. Saprolite is the dominant component of the overburden, a clay-rich residuum derived from the in situ chemical weathering of the bedrock. The saprolite commonly retains the appearance and texture of the bedrock, despite its unconsolidated nature.

The undisturbed and minimally disturbed material at the surface in the NLA has been mapped and is primarily classified as loam. The surficial material in other portions of the installation is

comparable to the NLA. Surficial units mapped at the NLA include Altavista Sandy Loam, Ashlar Sandy Loam, Appling Sandy Loam, Cartecay, Cecil Sandy Loam, Cecil Urban Land, Gwinnett Sandy Loam, and Urban Land Transitional (U.S. Department of Agriculture, 1979).

4.5.5 Demography and Land Use

The Property is bounded on the north by residential areas consisting of the Forest Park and Conley communities. The eastern and southwestern borders have mixed commercial/industrial use, while the southern area is adjacent to a mixed residential/commercial/industrial zone.

Over the years, the installation work force has grown to include 456 active duty personnel, 1,663 Army reservists, and 1,667 civilians.

4.6 Biological and Cultural Resources Summary

4.6.1 Biological Resources

4.6.1.1 Vegetation

Most of the land of the Property was cleared of vegetation in the past. Approximately 35 percent of the installation is covered with trees; the remainder consists of large expanses of regularly mowed grassed areas and man-made structures such as roads, parking lots, railroads, warehouses, and other buildings. The large quantity of paved and “roofed-over” areas contribute to high volumes of storm water runoff throughout the installation. Due to the lack of ground cover, this runoff promotes erosion, adds to siltation in the streams and storm drainage systems, and increases maintenance.

Woodland areas on the Property are largely confined to the buffer areas along the northern and southern boundaries. These woodlands are primarily pine forests and mixed pine hardwood forests. Dominant trees on the installation included loblolly pine with some mixture of gum, oak, and yellow poplar timber with both upland and bottomland hardwood inclusions. Common understory trees include flowering dogwood, black cherry, sassafras and sourwood. Several species of vines, such as kudzu, Japanese honeysuckle, poison ivy, trumpet vine, greenbriar and wild grapes are intrusive pioneer species present on the installation. Herbaceous plants found primarily in open areas of the installation include goldenrod, ragweed, frost aster, fescue, broomsedge, Bermuda grass, foxtail grass, bull grass, panic grass, purple top, and others. (Nadata Planning Group, 1997a).

The Property has a forest management program which incorporates timber harvest, understory/invasive weed control and a prescribed burn program. Timber harvests occurred in 1995, 1997, 2003, and 2006.

4.6.1.2 Wildlife

The Property serves as a refuge for plants and animals that are being excluded from surrounding habitats due to increasing urbanization in Clayton County. Birds are the most prevalent and noticeable vertebrate wildlife. Typical species include the starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), common grackle (*Quiscalus uiscula*), American robin (*Turdus migratorius*), mockingbird (*Mimus polyglottos*), mourning dove (*Zenaida macroura*), common crow (*Corvus brachyrhynchos*), bluejay (*Cyanocitta cristata*), and rock dove (common pigeon) (*Columbia livia*). Common mammals include the eastern cottontail (*Sylvilagus floridanus*), opossum (*Didelphis vifginiana*), house mouse (*Mus musculus*), and Norway rat (*Rattus norvegicus*). The species of reptiles and amphibians which commonly occur in habitats such as that available on the installation include black rat snake (*Elaphe obsolea obsoleta*), northern black racer (*Coluber constrictor constrictor*), American toad (*Bufo americanus*), bullfrog (*Rana catesbeiana*), and the eastern box turtle (*Terrapene Carolina Carolina*).

The Property has been managing the whitetail deer herd by incorporating archery only deer hunts since 2001.

Aquatic ecosystems at the Property consist of small streams, most of which arise on the installation, and two small lakes. The lakes are managed for fishing recreation.

The two lakes (Marchman Lake and Stephens Lake) on the Property are stocked with largemouth bass (*Micropterus salmoides*), and bream (*Lepomis sp.*). Marchman Lake is also stocked with sterile grass carp (*Ctenopharyngodon idella*) and Stephens Lake is also stocked with black crappies (*Pomoxis nigromaculata*),

4.6.1.3 Rare, Threatened, and Endangered Species

Between August and December, 2000, a threatened and endangered species survey was conducted to determine the presence or absence of any unusual, rare, threatened, or endangered plant species occurring on the Property. This survey concentrated on, but was not limited to, potential habitat areas of state and federally listed threatened and endangered plant species known to occur in Clayton County and the surrounding area. Four populations of pink ladyslipper were observed during the field survey. Pink ladyslipper is listed as an “unusual species” in the state of Georgia and is a protected plant of Georgia (Georgia Natural Heritage

Program, 1999). This was the only unusual, rare, threatened, or endangered plant species observed during the field survey.

4.6.2 Cultural Resources

This section describes cultural resources at the Property (U.S. Department of the Army, 2002).

4.6.2.1 Archeological Resources

Construction activities and ground disturbing activities will have little impact on archeological resources at the Property. Archival documentation indicates that significant earthmoving activities took place during the construction of the Property, which obliterated any evidence of previous human activity within the built-up areas of the installation. The recent archeological survey also notes that extensive landfill and borrowing activities and logging have taken place in the remaining areas of the base, again disturbing or destroying any archeological materials that might have been located on the installation. Due to heavy ground cover by kudzu, however, a thorough walkover of the installation was difficult and some resources may have been hidden at the time. An archeological survey was conducted at the Property in December 1999 to assess sites on the base. Only one isolated find that is not eligible was reported (Janus Research, 1999).

4.6.2.2 Architectural/Historic Resources

The greatest impact from regular maintenance, repair, and rehabilitation of existing structures is to the architectural and historical integrity of the historic structures and landscapes on the installation. This pressure is in the form of building demolitions, new construction, adaptive reuse, and the growing forestry program. Numerous surveys and reports have been prepared to identify historic resources and make recommendations for the management of those resources. The installation has an Integrated Cultural Resources Management Plan that identifies all cultural resources eligible for listing on the National Register of Historic Places and makes recommendations for maintenance and management of those resources. A total of 31 eligible buildings and/or structures have been identified at the Property, along with a proposed historic district.

Cultural. A proposed historic district, including 31 eligible buildings and/or structures were identified in the Integrated Cultural Resources Management Plan as being eligible for listing on the National Register. A map depicting the areas of historical significance is presented on Figure 8.

The eligibility date for five buildings (135-139) may have been extended until 2020 due to changes in their roof line. Their status is pending.

Landscape Resources. Past research on the historic landscape of the Property has been limited to studying old photographs within the files at Fort McPherson and at the National Archives. This research, however, has been tangential to other building-related research. No formal studies have been conducted to identify the historic landscapes of the installation. The photographs and site plans are used to guide land-use issues and some landscape design issues on a macro scale, but detailed historic landscape design issues have not been addressed.

4.7 Site Maps

The following site maps are used in this ECP to provide both a current and historical overview of the property. These maps have been obtained from prior reports and have been updated as needed:

- Site Location Map
- General Site Map
- FEMA and AAFES Areas
- Utility Maps, including the following:
 - Water Systems
 - Sanitary Sewer System
 - Storm Water System
 - Electrical Systems
- Cultural Resources
- IRP Sites
- Storage Tank Locations
- ECP Parcels
- ECP Qualified Parcels.

The installation has a geographical information system (GIS) that is maintained. ESRI architecture is utilized in the ARC Info software. Available information layers are itemized in Table 4-4.

Table 4-4

Layers Available in Current Fort Gillem GIS

GIS Layer	GIS Layer Subtype
BUILDINGS	CANOPY_PAVILION_AREA
BUILDINGS	SHED_AREA
BUILDINGS	SLAB_AREA
BUILDINGS	STRUCTURE_EXISTING_AREA
BUILDINGS	STRUCTURE_FOUNDATION_LINE

GIS Layer	GIS Layer Subtype
CADASTRE	INSTALLATION_AREA
COMMUNICATIONS	COMM_DUCT_LINE
COMMUNICATIONS	COMM_MANHOLE_POINT
COMMUNICATIONS	COMM_OTHER_TYPE_CABLE_LINE
COMMUNICATIONS	COMM_PULLBOX_POINT
CULTURAL	HISTORIC_DISTRICT_AREA
CULTURAL	HISTORIC_STRUCTURE_AREA
ENV_HAZ_HAZMAT_HAZWASTE	HAZMAT_STORAGE_BUILDING_POINT
ENV_HAZ_POLLUTION_CONTROL	AIR_POLLUTION_SOURCE_POINT
ENV_HAZ_REGULATED_TANK	ABOVEGROUND_STORAGE_TANK_POINT
ENV_HAZ_REGULATED_TANK	UNDERGROUND_STORAGE_TANK_POINT
ENV_HAZ_SITE_MGMT	ENVIRONMENTAL_RESTORATN_AREA
ENV_HAZ_SITE_MGMT	ENVIRONMENTAL_RESTORATN_POINT
FLORA	FLORA_SPECIES_AREA
FLORA	FLORA_SPECIES_POINT
FUTURE_PROJECTS	FUTURE_PROJECTS_AREA
GEODETTIC	CONTROL_POINT
GEODETTIC	IMAGE_AREA
HYDROGRAPHY	FLOOD_ZONE_AREA
HYDROGRAPHY	SURF_WAT_COURSE_CENTERLINE
HYDROGRAPHY	SURFACE_WATER_BODY_AREA
IMPROVEMENT_EROSION	WEIR_LINE
IMPROVEMENT_GENERAL	FENCE_LINE
IMPROVEMENT_GENERAL	GENERAL_IMPROVEMENT_FEAT_POINT
IMPROVEMENT_RECREATION	ATHLETIC_COURT_AREA
IMPROVEMENT_RECREATION	ATHLETIC_FIELD_AREA
IMPROVEMENT_RECREATION	GOLF_COURSE_BUNKER_AREA
IMPROVEMENT_RECREATION	GOLF_COURSE_FAIRWAY_AREA
IMPROVEMENT_RECREATION	GOLF_COURSE_FWAY_ALIGNMNT_LINE
IMPROVEMENT_RECREATION	GOLF_COURSE_PUTTING_GREEN_AREA
IMPROVEMENT_RECREATION	GOLF_COURSE_TEE_AREA
IMPROVEMENT_RECREATION	SWIMMING_POOL_AREA
IMPROVEMENT_WELL	WATER_WELL_POINT
LANDFORM	ELEVATION_CONTOUR_LINE
LANDFORM	SPOT_ELEVATION_POINT
LANDFORM	TOPOGRAPHY_SLOPE_GRADIENT_AREA
LAND_STATUS	CONSTRUCTION_AREA
LAND_STATUS	GROUNDS_MAINTENANCE_AREA
LAND_STATUS	LAND_USE_AREA
MILITARY_OPERATIONS	MIL_SURFACE_DANGER_ZONE_AREA
SOIL	SOIL_MAP_UNIT_AREA
TRANSPORTATION_PEDESTRIAN	PEDESTRIAN_SIDEWALK_LINE
TRANSPORTATION_PEDESTRIAN	PEDESTRIAN_TRAIL_CENTERLINE

GIS Layer	GIS Layer Subtype
TRANSPORTATION_RROAD	RAILROAD_CENTERLINE
TRANSPORTATION_VEHICLE	CURB_LINE
TRANSPORTATION_VEHICLE	ROAD_AREA
TRANSPORTATION_VEHICLE	ROAD_BRIDGE_AREA
TRANSPORTATION_VEHICLE	ROAD_CENTERLINE
TRANSPORTATION_VEHICLE	VEHICLE_DRIVEWAY_AREA
TRANSPORTATION_VEHICLE	VEHICLE_PARKING_AREA
UTILITIES_ELECTRICAL	ELECT_TRANSFORMR_BANK_POINT
UTILITIES_ELECTRICAL	ELECTRICAL_CABLE_LINE
UTILITIES_ELECTRICAL	ELECTRICAL_DUCTBANK_LINE
UTILITIES_ELECTRICAL	ELECTRICAL_JUNCTION_POINT
UTILITIES_ELECTRICAL	ELECTRICAL_RISER_POINT
UTILITIES_ELECTRICAL	ELECTRICAL_SUBSTATION_AREA
UTILITIES_ELECTRICAL	ELECTRICAL_SWITCH_POINT
UTILITIES_ELECTRICAL	EXTERIOR_LIGHTING_POINT
UTILITIES_FUEL	FUEL_LINE
UTILITIES_GAS	NAT_GAS_REG_REDUCER_POINT
UTILITIES_GAS	NATURAL_GAS_FITTING_POINT
UTILITIES_GAS	NATURAL_GAS_JUNCTION_POINT
UTILITIES_GAS	NATURAL_GAS_LINE
UTILITIES_GAS	NATURAL_GAS_METER_POINT
UTILITIES_GAS	NATURAL_GAS_VALVE_POINT
UTILITIES_GENERAL	CONDUIT_CENTERLINE
UTILITIES_GENERAL	UTILITY_POLE_GUY_LINE
UTILITIES_GENERAL	UTILITY_POLE_GUY_POINT
UTILITIES_GENERAL	UTILITY_POLE_TOWER_POINT
UTILITIES_HCS	HEAT_COOL_FITTING_POINT
UTILITIES_HCS	HEAT_COOL_JUNCTION_POINT
UTILITIES_HCS	HEAT_COOL_LINE
UTILITIES_HCS	HEAT_COOL_PUMP_POINT
UTILITIES_INDUSTRIAL	IND_WSTE_OIL_WAT_SEP_POINT
UTILITIES_STORM	CULVERT_CENTERLINE
UTILITIES_STORM	STORM_SEWER_DISCHARGE_POINT
UTILITIES_STORM	STORM_SEWER_DOWNSPOUT_POINT
UTILITIES_STORM	STORM_SEWER_FITTING_POINT
UTILITIES_STORM	STORM_SEWER_HEADWALL_POINT
UTILITIES_STORM	STORM_SEWER_INLET_POINT
UTILITIES_STORM	STORM_SEWER_JUNCTION_POINT
UTILITIES_STORM	STORM_SEWER_LINE
UTILITIES_STORM	STORM_SEWER_OPEN_DRAINAGE_LINE
UTILITIES_WASTEWATER	WASTEWATER_FITTING_POINT
UTILITIES_WASTEWATER	WASTEWATER_GREASE_TRAP_POINT
UTILITIES_WASTEWATER	WASTEWATER_JUNCTION_POINT

GIS Layer	GIS Layer Subtype
UTILITIES_WASTEWATER	WASTEWATER_LINE
UTILITIES_WASTEWATER	WSTEWAT_OIL_WAT_SEPARATR_POINT
UTILITIES_WATER	WATER_FIRE_CONNECTION_POINT
UTILITIES_WATER	WATER_FITTING_POINT
UTILITIES_WATER	WATER_HYDRANT_POINT
UTILITIES_WATER	WATER_JUNCTION_POINT
UTILITIES_WATER	WATER_LINE
UTILITIES_WATER	WATER_METER_POINT
UTILITIES_WATER	WATER_REGULATOR_REDUCER_POINT
UTILITIES_WATER	WATER_VALVE_POINT

5.0 Environmental Conditions

This chapter describes environmental conditions at Fort Gillem.

5.1 Environmental Permits and Licenses

The following environmental permits and licenses are in effect at Fort Gillem.

5.1.1 RCRA Status

Currently, Fort Gillem operates as an LQG (EPA ID # GA0210020046). By definition, an LQG generates more than 2,200 pounds (1,000 kilograms) of hazardous waste a month. Fort Gillem operates one 90-day accumulation site which is located at the corner of South Y Avenue and South Z Avenue. All hazardous waste management is performed under the 2003 Hazardous Waste Management Plan.

Fort Gillem is an SQG of universal wastes (UW), as the installation generates less than 11,000 pounds (5,000 kilograms) of UW at any time. The installation has procedures in place for storing UW until the items can be picked up by an outside contractor for recycling. Currently, Fort Gillem handles only batteries and mercury containing lamps as UW.

5.1.2 Solid Waste Permits

Fort Gillem does not have any solid waste permits at this time. There was a permit when the fort was operating a landfill in the area known as the NLA. The landfill was closed approximately in 1982, when there was no regulatory requirement for closure certification. No closure documentation was found during the file review conducted for this ECP.

All landfills have been investigated under the IRP, as discussed in Section 5.2.

5.1.3 Underground/Aboveground Storage Tank Permits

All active storage tanks on the Property are registered. A list of all registered tanks is located in Section 5.4. All USTs and ASTs in the state of Georgia are permitted by facility. The primary usage of all current tanks is storage of waste oil, diesel fuel and/or #2 heating oil for boilers and emergency generators.

5.1.4 National Pollutant Discharge Elimination System Permits

Fort Gillem submitted a Notice of Intent in August 2006 and is covered under the state storm water general permit that authorizes the discharge of storm water from industrial activities to the

Table 5.1 redacted.

waters of the State of Georgia. The installation has a Storm Water Pollution Prevention and Management Plan which is used to meet the requirements of Part IV of the General Permit.

5.1.5 *Drinking Water Permits*

Fort Gillem does not maintain any drinking water permits. Water is supplied by Clayton County from off site.

5.1.6 *Air Permits*

Fort Gillem has a general air quality permit (No. 9711-063-0048-S-04-0, dated 24 July 2006) for all sources. This new permit, which replaces the previous air permit dated 26 January 2005, was issued to add the emergency generator at the LP Gas Air Mixing Plant that was inadvertently omitted. A list of sources of emissions included in the permit is presented in Table 5-1.

5.1.7 Nuclear Regulatory Commission Licenses. Fort Gillem does not hold any Nuclear Regulatory Commission (NRC) Licenses. However, several Army held NRC commodity Licenses and Army Radiation Authorizations are applicable to Fort Gillem as follows:

- An NRC License is held by EOD as BML 29-01022-14. This license is for calibrators containing radioactive materials.
- An NRC License is held by the U.S. Army Tank-Automotive & Armaments Command at Rock Island, Illinois, for use by all DOD installations and job sites as BML 12-0072-06. This license is for radioactive materials use in armaments and artillery systems.
- An NRC License is held by the U.S. Army Armament & Chemical Acquisition and Logistics Activity at Rock Island, Illinois for use by all DOD installations and job sites as BML 12-0072-13. This license is for radioactive materials used in chemical agent detectors.
- An NRC License is held by the U.S. Army Armament & Chemical Acquisition and Logistics Activity at Rock Island, Illinois for use by all DOD installations and job sites as BML 12-0072-14. This license is for radioactive materials use in chemical agent monitors.
- An NRC License is held by the U.S. Army Soldier & Biological Chemical Command at Aberdeen Proving Ground, Maryland, for use by all DOD installations and job sites as BML 19-30563-01. This license is for radioactive materials use in chemical agent detectors and monitors.
- An NRC License was held by the U.S. Army Communications Electronics Command (CECOM) Safety Office at Fort Monmouth, New Jersey for use at Fort Monmouth or other temporary job sites as BML 29-01022. This license was for the use of by-product radioactive materials in research and development and instrument calibrations. This license expired 28 February 2005.
- An NRC License was held by the U.S. Army CECOM Safety Office at Fort Monmouth, New Jersey, for use at DOD installations and job sites as BML 29-01022-14. This license was for the use of radiological materials in instrument calibrations. This license expired 31 October 2003.
- An Army Radiation Authorization was held by the U.S. Army CECOM Safety Office at Fort Monmouth, New Jersey, for use at DOD installations and job sites

as ARA 24-12-07. This authorization was for the use of radiological materials in lensatic compasses. The authorization expired 31 January 2005.

- An Army Radiation Authorization was held by the U.S. Army CECOM Safety Office at Fort Monmouth, New Jersey, for use at DOD installations and job sites as ARA 29-10-06. This authorization was for the use of radiological materials as radioluminous paint. The authorization expired 31 January 2005.
- An Army Radiation Authorization was held by the U.S. Army CECOM Safety Office at Fort Monmouth, New Jersey, for use at DOD installations and job sites as ARA 29-10-10. This authorization was for the use of radiological materials in electronic equipment. The authorization expired 31 January 2005.
- An Army Radiation Authorization was held by the U.S. Army CECOM Safety Office at Fort Monmouth, New Jersey, for use at DoD installations and job sites as ARA 29-10-12. This authorization was for the use of radiological materials in night vision devices. The authorization expired 31 January 2005.

Areas at Fort Gillem found to be potentially impacted from historical use of radioactive material are included in Section 5.9.

5.1.8 Other Permits/Licenses

There are no other permits or licenses in place for Fort Gillem.

5.2 Environmental Cleanup

5.2.1 Installation Restoration Program (IRP)

Fort Gillem has an ongoing IRP which was initiated in 1980 with the installation assessment (USATHAMA, 1980). The IRP initially identified 14 sites, designated FTG-01 through FTG-14. FTG-12 included USTs, which were not handled under the IRP. The 13 remaining sites were determined to require investigation under the IRP. Response complete has been attained for seven of these sites (Table 5-2). The other six sites remain open and include the following:

- FTG-01, NLA
- FTG-04, 900 Area Solvent Disposal Pit
- FTG-07, SEBS, Burial Site No. 1
- FTG-09, SEBS, Burial Site No. 3
- FTG-10, SEBS, Burial Site No. 4
- FTG-13, Western Sewage Treatment Plant.

These six sites are included in a performance-based contract awarded by the Army in fiscal year 2005. The current scope of the performance-based contract is to take five of the sites to remedy

in place (FTG-01, FTG-04, FTG-07, FTG-09, and FTG-13) and the sixth site (FTG-10) to RC by 30 September 2007.

Installation restoration activities at FTG-01 are being conducted under an administrative order from the GA EPD issued 10 September 1993 (IAP, 2006). The administrative order placed FTG-01 in the Hazardous Response Site Act program; however, GA EPD agreed in 2005 to let the Army address the site following the CERCLA process. The other sites are being investigated voluntarily under the Defense Environmental Restoration Program, which is consistent with the CERCLA process.

Elevated concentrations of chlorinated solvents, principally TCE and 1,1,2,2-tetrachloroethane, are present in groundwater and have migrated off site at significant concentrations from FTG-01 on the north side of the installation and from FTG-09 on the southeast side of the installation. TCE in groundwater has also migrated off-site at FTG-04 and FTG-13, both on the north side of the installation, but at lower concentrations.

Table 5-2 summarizes the seven sites that have attained RC. The Army has requested no further action from the GA EPD on six of the seven sites. The GA EPD has reviewed or is currently reviewing documents related to the sites, but has not yet issued approval or concurrence.

Table 5-2
Status of Closed IRP Sites at Fort Gillem

Site	Name	Year RC Attained	Remedy	Comments
FTG-02	Southeast Area Dump Site	2002	No Further Action requested in SI Report.	Located in the extreme southeast corner of the installation with some buried waste present at shallow depths. Soil sampling included detections of metals that were largely below background values. Groundwater sampling has included detections of VOCs at low concentrations, with no maximum contaminant level exceedances in nearly five years.
FTG-03	900 Area Industrial Wastewater Treatment Plant	1998	The site structures and associated process piping have been removed. No Further Action requested in the SI Report.	Soil sampling did not identify a source of contamination. Sporadic detections of VOCs in groundwater may be from an off-site source upgradient of the 900 Area.

Site	Name	Year RC Attained	Remedy	Comments
FTG-05	900 Area Heating Plant	1998	The site structures have been demolished and a 42,000 gallon UST was removed. No Further Action requested in the SI Report	Soil sampling at the site did not identify a source of contamination. Detections of VOCs in groundwater were from FTG-04, an open IRP site upgradient of FTG-05.
FTG-06	900 Area Vehicle Wash Rack	1998	No Further Action requested in the SI Report.	Soil sampling at the site did not identify a source of contamination. Detections of VOCs in groundwater at low concentrations likely from FTG-04.
FTG-08	SEBS, Burial Site #2	1999	No Further Action requested in the SI Report.	No buried wastes are present at the site and soil sampling did not identify a source of contamination. Detections of TCE in a bedrock monitoring well can be attributed to FTG-07, an open IRP site.
FTG-11	Unexploded Ordnance Site	1995	No action taken, no unexploded ordnance found.	Historical records indicate that a German bomb was transported to Fort Gillem in 1946 and that the bomb was exhumed, decontaminated, and buried in place. The investigation included geophysical surveying and soil sampling. The surveying identified some anomalies that could not be attributed to unexploded ordnance. The soil sampling did not identify contamination.
FTG-14	Eastern Sewage Treatment Plant	1995	No Further Action requested in the SI Report.	The site has been out of service since 1950 and some of the structures remaining in place are overgrown with vegetation. Soil sampling did not identify a source of contamination. Groundwater samples had very few detections, with one detection of dieldrin in a well cross-gradient from the site. The dieldrin is likely from historical application.

SI – Site investigation.

FTG-11. Historical Army records state that a 1,000-pound German bomb was discovered in the Georgia Railroad Freight Yard in Atlanta on 30 June 1946. The bomb was transported from Atlanta to Fort Gillem, then called the Atlanta General Depot. According to an Army memorandum dated 12 September 1946, the bomb was buried and decontaminated in a 10-foot deep hole. The bomb was surrounded by a mixture of chloride, lime, and earth, according to the memorandum. The burial site was described as being within 50 feet of the reservation boundary fence and within 20 feet of an improved gravel road running parallel to the boundary fence.

When IRP sites were identified at Fort Gillem in the 1980s, the bomb site was designated as FTG-11. A Site Investigation (SI) was completed for FTG-11 in 1995 that included geophysical surveying and soil and groundwater sampling. The area investigated for FTG-11 is located south of a railroad line spur adjacent to South V Street, and bounded by South 11th Street to the west, South 13th Street to the east, and Marchman Lake Road to the south. The area lies to the northwest of the Southeast Burial Sites. It is not clear what process (interviews, historical records review, etc.) was used to identify this site; however, the location is not consistent with the description provided in the 12 September 1946 memorandum.

The SI Report for FTG-11 stated that no contamination that might have been related to bomb disposal was found. The report concluded that the area investigated had not been adversely affected by historical activities. The geophysical surveying performed as part of the SI identified potential trenches in the southern portion of the study area and the SI Report recommended that these areas be investigated to confirm or deny the presence or absence of potential contamination. As a result of the SI at FTG-11, the Army determined that the site had achieved response complete.

It should be noted that IRP site FTG-09, southeast of the area studied for FTG-11, is located in the approximate position of the bomb disposal site described in the 12 September 1946 memorandum. Extensive investigation at this site has identified an area of highly-contaminated soil extending to a depth of approximately 20 feet below ground surface. The soil contamination has generated a large plume of groundwater contamination that extends off site and primarily includes TCE and 1,1,2,2-tetrachloroethane. Although the historical records do not specify if organic compounds were used in conjunction with the bomb disposal, 1,1,2,2-tetrachloroethane was used by the Army as a solvent component of “DANC.” TCE is an abiotic breakdown product of 1,1,2,2-tetrachloroethane. Circumstantially, it appears that FTG-09 may be the actual bomb disposal site. In any event, the Army is addressing the contamination at FTG-09 under the IRP.

The IRP sites are depicted on Figure 9.

Off-Post Investigations. Previous environmental investigations have documented off-post surface water and groundwater contamination by VOCs (particularly TCE and 1,1,2,2-tetrachloroethane) originating from five of the six IRP sites. There is little evidence to suggest the FTG-10 site is a source of VOC contamination detected in the off-post areas south of the Property (Shaw, 2006a).

The working conceptual site model for the Property suggests that contaminated groundwater discharges or upwells into the shallow surface water drainage features where the drainage feature intersects the groundwater plume. As such, groundwater plumes migrating off post typically create associated off-post surface water contamination.

FTG-01 and FTG-09 Sites. Relatively large and concentrated (maximum concentrations exceeding 100 times the maximum contaminant level) off-post groundwater plumes have originated from the FTG-01 and FTG-09 sites.

Surface water and groundwater contamination by chlorinated solvents was associated with the FTG-01 site in the late 1990s. Ongoing delineation of this contamination indicates there are three separate groundwater/surface water plumes. The westernmost plume exits the post along the northwestern corner of the installation. The primary contaminant in this area is TCE. A second off-post plume exists, originating from the central portion of the FTG-01 site. This groundwater and surface water plume is migrating off post, parallel to the course of the western stream. Primary VOCs within this plume are TCE and 1,1,2,2-tetrachloroethane. A third surface water and groundwater VOC plume exits the post and is migrating parallel to the eastern stream. Primary VOCs associated with this plume include chloroform and carbon tetrachloride.

As with the FTG-01 site, chlorinated VOCs originating from the FTG-09 site are migrating off the Property dissolved in the shallow groundwater and are discharging into the surface water bodies south of the southern Property boundary. A relatively large (approximately 1 mile long) and concentrated (maximum concentration of TCE greater than 1,000 micrograms per liter) groundwater plume is associated with the off-Property portion of the FTG-09 site.

FTG-04, FTG-07 and FTG-13. TCE in groundwater has also migrated off-Property from the FTG 04, FTG-07, and FTG-13 sites. Concentrations of VOCs in groundwater and surface water samples indicate the off-Property plumes associated with these three sites are smaller and much less concentrated than the off-Property plumes originating from the FTG-01 and FTG-09 sites.

Off-Post Domestic Well Sampling. In the early 1990s, the Army sampled domestic wells at 18 off-post residences. Although the detected concentrations were low (below or equal to maximum contaminant levels) and the locations were not downgradient of the IRP sites, the Army provided connections to municipal water supplies to residents at these locations. The Army completed additional sampling of domestic wells in 2001 and 2002. Well surveys have determined that no wells are currently in use by residents near the installation. The existing

domestic wells have not been abandoned, however, and the open status of the domestic wells could pose a potential liability.

5.2.2 Military Munitions Response Program

There are no closed, transferred or transferring ranges at this time, only active or inactive operating ranges (Malcolm Pirnie, 2006), which are discussed in Section 4.3.4.

5.2.3 Previous Environmental Investigations

Numerous environmental investigations have been completed at Fort Gillem, starting with the installation assessment in 1980 (USATHAMA, 1980). The installation assessment was the first systematic evaluation of hazardous waste handling and disposal at Fort Gillem. The assessment report discussed the environmental setting, land-use patterns, past and present operations at each building, training operations across the post, handling and storage of industrial chemicals, chemical agents, biological agents, narcotics, radiological and pesticide/herbicide/fertilizer usage, disposal operations (liquid and solid waste treatment), demolition and burning grounds, and existing water quality data. This report also presented a comprehensive review of disposal records from 1960 to 1975 and interviews with past and present employees of Fort Gillem. The report stated that no documentation existed of disposal practices prior to 1960.

The Army implemented a hydrogeologic study at Fort Gillem in 1980 that included the first installation of monitoring wells as well as surface water and sediment sampling (Geraghty & Miller, Inc., 1982). This study included the NLA (FTG-01) and the northern boundary of the installation downgradient of the Industrial Wastewater Treatment Plant (FTG-03), the Solvent Disposal Pit (FTG-04), the Heating Plant (FTG-05), and the Western Sewage Treatment Plant (FTG-13). The monitoring wells installed during this study and the surface water/sediment locations were sampled regularly between the mid-1980s and the early 1990s.

The Army conducted extensive investigations in FTG-01 in the early and mid-1990s. Geophysical surveying provided definition of former burial areas throughout FTG-01 and concluded that the nature and extent of soil and groundwater contamination needed to be defined (Black and Veatch Waste Services, Inc., 1993). A remedial investigation (RI) of FTG-01 followed that included soil gas surveying; trenching; monitoring well installation; and soil, surface water, sediment, and groundwater sampling (Foster Wheeler, 1996b). After completion of the RI, the Army implemented a biannual groundwater, surface water, and sediment sampling program. Subsequent to the RI, a number of other focused investigations were conducted within FTG-01 and in adjacent off-site areas (IT, 2001; 2002b). The few remaining data gaps at FTG-

01 were recently addressed (Hydrogeologic, Inc., 2006a) and the current goal is to achieve remedy in place (RIP) in 2007.

The SEBS (FTG-02, FTG-07, FTG-08, FTG-09, and FTG-10) were first investigated with the completion of an expanded site investigation (ESI) in the mid-1990s. The ESI included geophysical surveying; soil gas surveying; trenching; monitoring well installation; and soil, surface water, sediment, and groundwater sampling (Foster Wheeler, 1996a). After completion of the ESI, the Army implemented a biannual groundwater, surface water, and sediment sampling program.

RI sampling was completed within the SEBS (IT, 2001b) as well as in adjacent off-site areas (IT, 2002b). RC has been attained for FTG-02 and FTG-08 and the Army submitted reports to the GA EPD requesting no further action (Shaw, 2006a, b). RI reports have been prepared for FTG-07, FTG-09, and FTG-10 (Hydrogeologic, Inc., 2006b, c) and are currently in review by the GA EPD. The current goal is to achieve RC for FTG-10 and RIP for FTG-07 and FTG-09 in 2007.

The Army completed a number of investigations in the 900 Area, located in the western end of Fort Gillem. The 900 Area includes IRP sites FTG-03, FTG-04, FTG-05, and FTG-06. The initial investigations focused on FTG-04 and included soil and groundwater sampling to delineate the nature and extent of contamination (Hartrampf Engineering, 1991). The investigations at FTG-04 were followed by the excavation and treatment of contaminated soil that had been delineated (ENSR Consulting and Engineering, 1996).

An ESI was conducted for the four IRP sites in the 900 Area in the mid 1990s. The ESI included geophysical surveying, soil gas surveying; trenching; monitoring well installation; and soil, surface water, sediment, and groundwater sampling (Rust Environment & Infrastructure, 1996). Additional groundwater sampling occurred after the ESI. RC has been achieved for FTG-03, FTG-05, and FTG-06 and the Army submitted reports to the GA EPD requesting no further action (Shaw 2006c and 2006d). The few remaining data gaps at FTG-04 were recently addressed (Hydrogeologic, Inc., 2006d) and the current goal is to achieve RIP in 2007.

A 1995 investigation of the 900 Area included a visual site inspection of FTG-05. Buildings, coal stockpiles, vessels, and associated equipment had been removed. The investigation also included a radiation survey to assess the potential for the occurrence of radiation derived from coal and coal ash. The radiation survey had some elevated readings, but all were judged to be within expected ranges and no health concern was identified (Rust Environmental & Infrastructure, 1996).

The Army also conducted ESIs for the Eastern Sewage Treatment Plant (FTG-14) and the Western Sewage Treatment Plant (FTG-13) in the mid 1990s. These ESIs followed the same approach as those at the other sites and included geophysical surveying; soil gas surveying; trenching; monitoring well installation; and soil, surface water, sediment, and groundwater sampling (Foster Wheeler, 1996c; Rust Environment & Infrastructure, 1994). Additional groundwater sampling occurred after the ESIs. RC has been achieved for FTG-14 and the Army submitted a report to the GA EPD requesting no further action (Shaw, 2005). The few remaining data gaps at FTG-13 were recently addressed (Hydrogeologic, Inc., 2006d) and the current goal is to achieve RIP in 2007.

5.3 *Hazardous Substances*

Several hazardous substances associated with base operations at Fort Gillem include strong acids, bases, solvents, heavy metals, and materials associated with laboratory operations and building maintenance.

Table 5-3 summarizes the hazardous substances at Fort Gillem.

Table 5.3 redacted.

Fort Gillem currently maintains hazardous material data in the HMMS. Fort Gillem's HMMS team collects data on hazardous materials and hazardous waste from all agencies that handle these substances at Fort Gillem for input to the HMMS.

Currently hazardous substance disposal is reported by various departments and tenants for input into the HMMS system as substances are received and disposed. This information is used to facilitate centralized hazardous material control and management and to assist with environmental reporting.

Emergency Planning and Community Right to Know Act (EPCRA) Tier Two reports were reviewed for calendar years 2004 and 2005. Petroleum storage is not included in this section. Please reference Section 5.4 for details on petroleum products.

Section 312 of EPCRA also allows for an exemption "any substance to the extent that it is used as a research laboratory a hospital other medical facility under the direct supervision of a technically qualified individual." Therefore, the chemical storage at the CID laboratory was not examined.

The Fort Gillem Spill Prevention, Control, and Countermeasures Plan (Earth Tech, 2002) pertained only to the storage of oil and oil products.

Hazardous Waste. Hazardous materials and wastes associated with base operations include radiological materials, solvents, paints, strong acids and bases, preservatives, heavy metals, and other materials associated with laboratory operations and building maintenance. See Section 5.9 for additional details on the radiological materials at Fort Gillem.

Under the State of Georgia regulations, Fort Gillem, which includes all of its tenants and other entities, is the sole "generator" for regulatory purposes and can accumulate hazardous waste for up to 90 days. The Fort Gillem 90-day accumulation point is located at the corner of South Y Avenue and South Z Avenue. There is a regulatory exception to the 90-day accumulation rule: a hazardous waste satellite accumulation point, which is roughly defined as a point of

hazardous waste generation at or near a specific waste producing operation, can be found within certain areas at the Property. Under the regulations, up to 55 gallons of a hazardous waste can be accumulated at a satellite accumulation point for an indefinite period of time. Once the amount of waste exceeds 55 gallons, the excess waste must be moved within 3 days to a 90-day area. A DD Form 1348-1, completed by the environmental office waste contractors for submittal to the Defense Reutilization and Marketing Office (DRMO), must accompany all hazardous wastes turned in to 90-day accumulation points. The submittal of these documents initiates the process for off-site transportation and disposal of the waste generated on the Property. Hazardous wastes can be transported off post only by licensed hazardous waste transporters in possession of completed Uniform Hazardous Waste Manifests.

Various buildings on the Property operate as hazardous waste collection points that regularly use solvents, acids, paints, toxins, aerosols, metals, mercury, and other hazardous substances.

Fourteen areas currently or previously have been hazardous waste collection areas (Buildings 102, 107, 209B, 213B, 312, 400, 407, 609, 610, 817, 905, 925, 941 and the 500). Although a building may store up to 55 gallons of hazardous materials indefinitely, the materials ultimately end up being stored at the 90-Day Yard and the 90-Day Yard is used as the sole accumulation point.

5.4 Petroleum and Petroleum Products

Fort Gillem developed a listing of all known historic USTs and ASTs and their disposition. Table 5-4 summarizes available information regarding the tanks. Tanks in bolded letters are those that are still active per the VSIs and current inventory maintained by installation staff.

Table 5-4

Status of Fuel Tanks Historically Utilized at Fort Gillem

Tank ID/ Bldg # (location)	Year Installed	Tank Capacity	Construction Material	Product Stored	Regulated?	Any Release from Tank? (Y/N)	Soil Contamination?	Groundwater Contamination?	Closed in Place Date	Removal Date	NFA Recommended	GA EPD NFA Concurrence?
ASTs												
101-DF1	--	500	STL	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
107-AST	--	450	--	Oil	N	N	N	N	N/A	N/A	N/A	N/A
119-AST-DF1	1996	500	--	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
119-AST-MG1	1996	500	STL	Gasoline	N	N	N	N	N/A	N/A	N/A	N/A

Tank ID/ Bldg # (location)	Year Installed	Tank Capacity	Construction Material	Product Stored	Regulated?	Any Release from Tank? (Y/N)	Soil Contamination?	Groundwater Contamination?	Closed in Place Date	Removal Date	NFA Recommended	GA EPD NFA Concurrence?
201-AST-DF1	--	250	STL	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
212-AST	--	250	--	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
213-AST-LN1	--	1000	STL	Nitrogen	N	N	N	N	N/A	N/A	N/A	N/A
214-AST	--	225	--	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
312-AST-WO1	--	640	STL	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
400-AST-WO1	--	500	--	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
400-AST	--	250	--	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
400-AST	--	250	--	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
400-AST	--	250	--	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
400-AST	--	250	--	Transmissi on Fluid	N	N	N	N	N/A	N/A	N/A	N/A
401-AST-WO1	1996	125	STL	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
401-AST-WO2	1996	125	STL	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
401-AST-WO3	1996	500	STL	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
401-AST-WO4	1996	500	STL	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
401-AST-WO5	1996	250	STL	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
401-AST-AF1	1996	400	STL	Antifreeze	N	N	N	N	N/A	N/A	N/A	N/A
516-AST	--	250	--	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
516-AST	--	350	--	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
605-AST-DF1	--	500	STL	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
610-AST-WO1	--	2000	STL	Waste Oil	N	N	N	N	N/A	N/A	N/A	N/A
610-AST-LO1	--	500	STL	Lub Oil	N	N	N	N	N/A	N/A	N/A	N/A
900-1	--	1000	--	--	N	N	N	N	N/A	--	--	--
900-2	--	1000	--	--	N	N	N	N	N/A	--	--	--
931-AST	--	250	--	Diesel	N	N	N	N	N/A	N/A	N/A	N/A
USTs												
101-DF1	1977	5000	--	Diesel	--	N	N	N	1993	2005	Y	Y
101-DF2	1977	500	--	Diesel	--	N	N	N	1993	N/A	Y	Y
101-DF3	1977	500	--	Overflow	--	N	N	N	1993	2005	Y	Y
101-FO1	1977	20000	--	Heating Oil	N	N	N	N	1993	N/A	Y	Y
106-MG1	--	3000	--	Gasoline	--	--	--	--	--	--	--	--
106-MG2	--	3000	--	Gasoline	--	--	--	--	--	--	--	--
106-MG3	--	10000	--	Gasoline	--	--	--	--	--	--	--	--
106	--	4000	--	--	--	N	N	N	N/A	1991	--	--
111-FO1	--	18000	--	Heating Oil	N	Y	Y	N	N/A	1991	Y	Y
111-FO2	--	18000	--	Heating Oil	N	Y	Y	N	N/A	1991	Y	Y
114-FO1	--	10000	--	Heating Oil	N	Y	Y	N	N/A	1992	--	--
114-FO2	--	10000	--	Heating Oil	N	--	--	--	--	--	--	--
206-MG1	--	4000	--	Gasoline	--	--	--	--	--	--	--	--
206-MG2	--	4000	--	Gasoline	--	--	--	--	--	--	--	--

Tank ID/ Bldg # (location)	Year Installed	Tank Capacity	Construction Material	Product Stored	Regulated?	Any Release from Tank? (Y/N)	Soil Contamination?	Groundwater Contamination?	Closed in Place Date	Removal Date	NFA Recommended	GA EPD NFA Concurrence?
206-MG3	--	4000	--	Gasoline	--	--	--	--	--	--	--	--
210-FO1	--	4000	--	Heating Oil	N	Y	Y	N	N/A	1992	Y	--
213-FO1	--	8000	--	Heating Oil	N	N	N	N	N/A	1991	--	--
213-FO2	--	20000	--	Heating Oil	N	Y	Y	N	N/A	1991	--	--
213-FO3	--	20000	--	Heating Oil	N	Y	Y	N	N/A	1991	--	--
213-FO4	--	5000	--	Heating Oil	N	N	N	N	N/A	1996	Y	--
213-FO5	--	15000	--	Heating Oil	N	--	--	--	--	--	--	--
214-FO1	--	4000	--	Heating Oil	N	Y	Y	--	1992	N/A	--	--
304-FO1	--	10000	--	Heating Oil	N	Y	Y	--	--	--	--	--
305-FO1	--	20000	--	Heating Oil	N	Y	Y	--	N/A	2003	--	--
307-FO1	--	20000	--	Heating Oil	N	Y	Y	--	N/A	1994	Y	Y
308-FO1	--	10000	--	Heating Oil	N	N	N	--	N/A	1993	--	--
309-FO1	--	20000	--	Heating Oil	N	N	N	N	N/A	2003	Y	--
310-FO1	--	20000	--	Heating Oil	N	Y	Y	N	N/A	1996	Y	--
312-DF1	--	19000	--	Diesel	--	Y	Y	N	N/A	1990	Y	Y
312-DF2	--	19000	--	Naptha	--	Y	Y	N	N/A	1990	Y	Y
400-MG1	--	1000	--	Gasoline	--	--	--	--	--	--	--	--
400-FO1	--	1000	--	Heating Oil	N	--	--	--	--	--	--	--
400-LO1	--	1000	--	Lube Oil	--	--	--	--	--	--	--	--
400-AF1	--	1000	--	Antifreeze	--	--	--	--	--	--	--	--
401-FO1	--	20000	--	Heating Oil	N	Y	Y	Y	N/A	1992	--	--
401-FO2	--	20000	--	Heating Oil	N	Y	Y	Y	N/A	1992	--	--
401-FO3	--	20000	--	Heating Oil	N	Y	Y	Y	N/A	1992	--	--
401-FO4	--	20000	--	Heating Oil	N	Y	Y	Y	N/A	1992	--	--
401-FO5	--	300	--	Overflow	--	Y	Y	Y	N/A	1992	--	--
403-1	--	500	--	Solvent	--	N	N	N	1991	N/A	--	--
403-WO1	--	1000	--	Waste Oil	--	--	--	--	--	--	--	--
404-FO1	--	15000	--	Heating Oil	N	Y	Y	--	--	2003	Y	--
404-FO2	--	15000	--	Heating Oil	N	Y	Y	--	--	2003	Y	--
406-WO1	--	500	--	Waste Oil	--	--	--	--	--	--	--	--
504-DF1	--	250	--	Diesel	--	Y	Y	--	--	--	--	--
504-DF2	--	250	--	Diesel	--	Y	Y	--	--	--	--	--
504-DF3	--	250	--	Diesel	--	Y	Y	--	--	--	--	--
504-DF4	--	250	--	Diesel	--	Y	Y	--	--	--	--	--
505-FO1	--	10000	--	Heating Oil	N	N	N	--	N/A	1993	--	--
507-FO1	--	30000	--	Heating Oil	N	Y	Y	--	N/A	1996	Y	--
507-FO2	--	30000	--	Heating Oil	N	Y	Y	--	N/A	1996	Y	--
511-FO1	--	12000	--	Heating Oil	N	Y	Y	--	N/A	1992	--	--
512-FO1	--	10000	--	Heating Oil	N	N	N	--	N/A	1992	--	--
606-MG1*	--	10000	--	Gasoline	--	Y	Y	Y	--	--	--	--
606-DF1	--	10000	DFRP	Diesel	Y	Y	Y	Y	--	--	--	--
606-DF2	--	10000	DFRP	Diesel	Y	Y	Y	Y	--	--	--	--
610-DF1	--	10000	--	Diesel	--	Y	Y	Y	N/A	1998	--	--
610-FO1	--	20000	STL	Heating Oil	N	--	--	--	--	--	--	--
737-FO1	--	8000	--	Heating Oil	N	--	--	--	--	--	--	--
925-FO1	--	42000	--	Heating Oil	N	Y	Y	--	N/A	1996	Y	--

Tank ID/ Bldg # (location)	Year Installed	Tank Capacity	Construction Material	Product Stored	Regulated?	Any Release from Tank? (Y/N)	Soil Contamination?	Groundwater Contamination?	Closed in Place Date	Removal Date	NFA Recommended	GA EPD NFA Concurrence?
T-926	--	--	--	--	--	Y	Y	--	--	--	--	--
931-DF1	--	12000	--	Diesel	--	Y	Y	--	--	--	Y	Y
935-FO1	--	8000	--	Heating Oil	N	Y	Y	--	N/A	1993	--	--
935-FO2	--	300	--	Overflow	--	Y	Y	--	N/A	1993	--	--

DFRP
 STL Steel
 N No
 N/A Not Applicable
 NFA No Further Action
 Y Yes
 -- Information not available
 The tanks that are **bolded** are currently active

There are currently 8 active USTs and 26 active ASTs present at Fort Gillem. The remaining tanks have either been removed or closed in place.

A summary of the available documentation for historic and current tanks at Fort Gillem is as follows:

- Tanks associated with ten buildings had either no evidence of contamination during tank removal activities or soil contamination was above detection limits but below regulatory limits. The buildings include Buildings 307 (one tank, 307-FO1), 308 (one tank, 308-FO1), 309 (one tank, 309-FO1) 310 (one tank, 310-FO1) , 404 (two tanks, 404-FO1 and 404-FO2), 505 (one tank, 505-FO1), 512 (one tank, 512-FO1), 925 (one tank, 925-FO1), 106 (the tank had no documented label), 213 (one tank, 213-FO4), and 403 (one tank, 403-1).
- During tank removal activities, tanks associated with ten buildings had detected soil contamination. Contaminated soil was removed, and often over-excavated at Buildings 101 (four tanks, 101-DF1, 101-DF2, 101-DF3, and 101-DF4), 111 (two tanks, 111-FO1 and 111-FO2), 114 (one tank, 114-FO1), 210 (one tank, 210-FO1), 214 (one tank, 214-FO1), 312 (two tanks, 312-DF1 and 312-DF2), 507 (two tanks, 507-FO1 and 507-FO2), 511 (one tank, 511-FO1), 931 (one tank, 931-DF1) and 213 (two tanks, 213-FO2 and 213-FO3).

- Soil contamination was detected during tank removal activities associated with five buildings for which remedial activities have been initiated. The sites include Buildings 401 (five tanks, 401-FO1, 401-FO2, 401-FO3, 401-FO4, and 401-FO5), 504 (four tanks, 504-DF1, 504-DF2, 504-DF3, and 504-DF4), 606 (three tanks, 606-MG1, 606-DF1, 606-DF2), 610 (two tanks, 610-DF1 and 610-DF2), and T-926 (number of tanks not available).
- Soil contamination was detected during tank removal activities associated with two buildings; however, no information regarding remedial activities was available for review. The buildings included Buildings 305 (one tank, 305-FO1) and 935 (two tanks, 935-FO1 and 935-FO2).
- There was no available information regarding the status of the tanks at six of the UST locations. The locations included Buildings 206 (three tanks, 206-MG1, 206-MG2 and 206-MG3), 304 (one tank, 304-FO1), 400 (four tanks, 400-MG1, 400-MG2, 400-LO1, and 400-WO1), 406 (one tank, 406-WO1), 737 (one tank, 737-FO1), three tanks located at Building 106 (three tanks, 106-MG1, 106-MG2, and 106-MG3), and one tank located at Building 403 (one tank, 403-WO1).
- There were no documented releases for any of the ASTs at Fort Gillem. Visual site inspections of the current aboveground storage tanks did not reveal any evidence of leaks or spills.
- Documentation of No Further Action concurrence by the GA EPD exists for five UST sites. The locations include Buildings 101 (four tanks, 101-DF1, 101-DF2, 101-DF3, and 101-DF4), 111 (two tanks, 111-FO1 and 111-FO2), 307 (one tank, 307-FO1), 312 (two tanks, 312-DF1 and 312-DF2), and 931 (one tank, 931-DF1).
- A gas station was located in former Building 105. The building was demolished in the early 1990s. No documentation was available regarding the status of the site.
- Tanks used for storing heating oil or petroleum products were not regulated prior to 1988. Tanks used for storing heating oil for consumptive use of the premises where stored are excluded from Federal and GA EPD rules regardless of when the tank was installed or removed, including existing heating oil tanks. Although heating oil tanks are not regulated, releases of contaminants into the environment by these tanks are regulated.

- According to the 2002 Spill Prevention, Control, and Countermeasures Plan, oil storage estimated capacity is 148,875 gallons (Earth Tech, 2002).

Cleanup was conducted at nine of the UST sites (Buildings 101, 111, 312, 401, 504, 606, 610, T-926, and 931) at Fort Gillem that are listed in the GA EPD leaking UST program. Buildings 101, 111, 312, and 931 are listed as no further action sites, Buildings 401, 504, 610, and T-926 are listed as clean-up initiated and Building 606 is listed as a monitoring only site.

Building 101. Four USTs were installed in 1977 and closed in place in 1993. One 5,000-gallon diesel tank and one 500-gallon diesel tank were removed in January 2005 (U.S Public Health Services and Atlanta Engineering Management, 2005). The other two tanks remain closed in place. The UST removal activities indicated that there was no contamination. The GA EPD Leaking UST records indicate that there was a confirmed release at the site in 1999. GA EPD records show that a No Further Action concurrence was subsequently granted by the State.

Building 111. Two 18,000-gallon heating oil tanks were removed in December 1991. Hydrocarbon odors were present in the soil but the collected samples indicated that the contamination was below regulatory limits (Groundwater Services, 1992a). The GA EPD Leaking UST records indicate that there was a confirmed release at the site in 1992. GA EPD records show that a No Further Action concurrence was subsequently granted by the State.

Building 312. One 19,000-gallon diesel tank and one 19,000-gallon naphtha tank were removed in 1990. Releases from the two USTs caused soil contamination at the site. The tanks were removed and the contaminated soil was overexcavated (Atlanta Testing and Engineering, 1990). No further action concurrence was obtained from the GA EPD for the site.

Building 401. Five USTs were removed in 1992. Soil contamination extended into the groundwater table. Contaminated soil was overexcavated. Three groundwater monitoring wells were installed and have been sampled annually since 1997.

Building 504. Four 250-gallon diesel USTs operated at the site. The GA EPD Leaking UST records indicate that there was a confirmed release at the site in 1991. GA EPD records show that clean-up activities for the site are currently underway.

Building 606. The work at Building 606, which included the upgrading of two 10,000-gallon USTs, began on 15 June 1998. The existing piping was closed in place, and one of the tanks was converted to diesel storage. During the upgrading activities, a suspected release was indicated

due to visual evidence of stained soil in the tank pit and was subsequently reported to GA EPD on 17 July 1998. The UST closure report for Building 606 was submitted on 15 September 1998 (U.S. Public Health Services and Atlanta Engineering Management, 1998). After installation of the monitoring wells, a corrective action plan Part A report was submitted to the GA EPD in October 1998 to address the suspected release. Subsequent Addenda to the Corrective Action Plan reports were submitted in 2002 and 2006. The current site status is monitoring only with five monitoring wells onsite that are sampled semi-annually.

Building 610. Building 610 is an active facility in the central portion of Fort Gillem used by AAFES as a warehouse and maintenance facility. A diesel refueling station used by AAFES was formerly located south of Building 610 and consisted of one 10,000-gallon diesel UST, two fuel dispensers, and associated piping. The fuel tank and delivery systems passed a tightness test in 1994 but failed a subsequent test in 1996. Leaks were found in the fueling dispenser systems but not the tank (IT, 2002a).

In February 1997, the Fort McPherson Directorate of Installation Support collected six shallow soil samples that were found to be contaminated with benzene, toluene, ethylbenzene, and xylenes and total petroleum hydrocarbons. The USACE conducted a site investigation in June 1997 as an initial step towards submitting a corrective action plan Part A, that included soil sampling and monitoring well installation (USACE, 1998).

Free product was discovered in one of the wells in January 1998 and bailing for product removal was subsequently initiated. A total of 21.25 gallons of free product were bailed. On 20 November 1998, the UST and product lines were removed. The UST was cleaned, scraped, and taken to a landfill for disposal. Soil and groundwater were sampled from the excavation pit and were found to be contaminated with benzene, toluene, ethylbenzene, and xylenes and total petroleum hydrocarbons. Approximately 310 tons of soil were removed from the excavation pit and replaced with gravel topped by crushed stone and sand. A closure report was submitted to the Army in December 1998 (Geosciences, Inc., 1998).

IT conducted soil sampling and installed a recovery well in July 1999. A belt skimmer system and absorbent socks were used to recover an additional 5 gallons of free product. By 2002, no measurable free product remained in the recovery well (IT, 2002a).

In 2000, IT conducted an investigation to determine if underground utilities were serving as conduits for free product migration. No free product was observed. Field screening of the breathing zone had no detection of organic vapors. USACE tasked IT to prepare a corrective

action plan Part B, which recommended no further action for soil; monitoring and removal of free product, if present; and semiannual sampling of the wells at the site (IT, 2002a). Additional product removal is currently ongoing.

Building T-926. GA EPD Leaking UST records indicate that there was a confirmed release at the site in 1990. GA EPD records show that that clean-up activities for the site are currently underway.

Building 931. One 12,000-gallon diesel tank operated at the site. GA EPD Leaking UST records indicate that there was a confirmed release at the site in 1999. GA EPD records show that a No Further Action concurrence was subsequently granted by the State.

Historical and current storage tanks located at Fort Gillem are presented on Figure 10.

5.5 Oil/Water Separators

Six oil/water separators currently exist on the Fort Gillem property. The oil/water separators are located at Buildings 113, 402/413, 606, 610, 611 and 904 and are maintained on a regular basis. Visual site inspections of the current oil/water separators did not reveal any evidence of leaks or spills. Seven former oil/water separators were removed as part of construction projects. No releases were documented at these former oil/water separators.

5.6 Polychlorinated Biphenyls

All transformers at the Property have been surveyed and those containing PCBs were removed in 1987. An additional survey was performed in 2001 and, of the transformers sampled, none were found to contain PCBs at concentrations above 50 parts per million. In-service transformers with residual PCBs are replaced when they fail. There is no known record or documentation of PCB leaks or spills at the base. A non-PCB electrical substation was installed at Fort Gillem in 1987. Prior to 1987, an electrical substation was located at North 3rd Avenue and D Avenue. Installation personnel are unaware of any PCBs located at the former electrical substation. A listing of the status of all transformers as of December 2002 is provided as Appendix H.

Due to the age of many of the buildings on the property, PCBs may also be contained in the ballasts of older-type light fixtures. The presence of PCBs in the ballasts has not been confirmed. Any light ballast not marked with “No PCBs” should be assumed to contain PCBs and management and disposal of these light ballasts must be in accordance with local, state, and federal requirements.

5.7 Asbestos-Containing Materials

Fort Gillem has an Asbestos Management Program Plan, dated October 2001, which provides specific guidance for addressing asbestos related issues. Table 5-5 presents the known surveys for ACM.

Table 5-5

Fort Gillem Asbestos-Containing Material Surveys

Building Number	Date	Asbestos		O&M Plan
		Friable	Nonfriable	
101	1995	Y	Y	Y
133	1995	Y	Y	Y
155	1994	Y	Y	Y
205	1994	Y	Y	Y
208	1994	U	U	N/A
409	2005	N	Y	Y
517	1994	N	Y	Y
607	2001	Y	Y	Y
608	2002	Y	Y	Y
610	2002	N	Y	Y
710	1997	N	Y	Y
813	2002	Y	Y	Y
814	1994	Y	Y	Y
	2002	Y	Y	Y
817	1994	Y	Y	Y
	2002	N	Y	Y
818	1994	N	Y	Y
	2002	Y	Y	Y
819	2002	Y	Y	Y
820	1994	N	Y	Y
	2002	Y	Y	Y
822	1994	N	Y	Y
	2002	Y	Y	Y
917	1998	Y	Y	Y
935	1997	Y	Y	Y

N/A – Not available

O&M – Operation and maintenance.

U - Unknown

From 1994 to 2005, ACM surveys were conducted in 20 buildings. Of the 20 structures surveyed, 19 have ACM survey results documentation; 15 were found to have both friable and non-friable asbestos; and 4 structures were found to have only non-friable asbestos. All structures with reported asbestos have an asbestos operation and maintenance plan in place.

Initial and subsequent inspection surveys have been conducted over the years to assess the environmental status of a number of properties; however, not every property was surveyed nor every survey comprehensive.

Buildings having the highest priority for an ACM survey were those scheduled for near-term renovation/demolition, those suspected of having ACM in poor condition, and buildings occupied by children, medical facilities, and public areas. There are 164 buildings on the Fort Gillem property that have no documentation of asbestos surveys performed.

Current records indicate there have been limited installation-wide remediation or abatement projects. The surveys have been conducted to identify hazardous materials in place and evaluation of friability. Most site-specific abatement projects have occurred on an as-needed basis.

The majority of the surveys conducted were assessed a low to moderate disturbance potential. Only the areas that were assessed a high disturbance potential or an imminent health hazard were abated.

5.8 Lead and Lead-Based Paint

In 2003, a lead hazard management program plan was approved for implementation at the installation. In that plan, buildings were prioritized by date of construction. However, when buildings were assessed, soils were not investigated.

In November 2002, surface dust sampling was conducted in family housing to assess lead concentration in dust. A total of 53 samples collected in 5 buildings (135 through 139) indicated that there were no lead dust levels above regulatory limits. No documentation of lead dust sampling was found for five family housing buildings (131, 133, 134, 301, and 828) constructed prior to 1978.

Table 5-6 summarizes the lead wipe sampling results.

Table 5-6

Lead Wipe Sampling

Building Number	Survey by	Date	Results
Housing Unit 135A	Compass Environmental	Nov 2002	BRL
Housing Unit 135B	Compass Environmental	Nov 2002	BRL

Building Number	Survey by	Date	Results
Housing Unit 136A	Compass Environmental	Nov 2002	BRL
Housing Unit 136B	Compass Environmental	Nov 2002	BRL
Housing Unit 137A	Compass Environmental	Nov 2002	BRL
Housing Unit 137B	Compass Environmental	Nov 2002	BRL
Housing Unit 138A	Compass Environmental	Nov 2002	BRL
Housing Unit 138B	Compass Environmental	Nov 2002	BRL
Housing Unit 139A	Compass Environmental	Nov 2002	BRL
Housing Unit 139B	Compass Environmental	Nov 2002	BRL

BRL – Below Regulatory Limit

Many of the facilities and buildings at the Property were constructed before the DOD ban on the use of lead-based paint in 1978 and are likely to contain one or more coats of such paint. In addition, some facilities constructed immediately after the ban may also contain lead-based paint, because inventories of such paints that were in the supply network were likely to have been used at these facilities. Table 5-7 presents a list of the buildings assumed to contain lead based paint.

Table 5-7

Buildings Assumed to Contain Lead-Based Paint

Building Number	Design Use Description	Construction date
Building 101	Administration/First USA Headquarters	1942
Building 102	DEH Admin	1942
Building 103	Communication/Fire Station	1942
Building 104	Military Police/Military Police Station	1942
Building 107	DIS Facility Maintenance	1942
Building 108	Maintenance/DIS Facility Maintenance	1942
Building 110	Gas Storage, Flammables	1942
Building 111	Gas Storage, Flammables	1942
Building 113	Storage/DIS Facility Maintenance	1944
Building 114	Boiler House Paint and Oil Storage	1942
Building 116	Storage/DEH Storage	1942
Building 117	Paint and Oil Storage	1942
Building 131	Housing/Guest Cottage	1941
Building 132	Communication/Com Club Storage	1953
Building 133	Communication/Comm Club	1945

Building Number	Design Use Description	Construction date
Building 134	Housing/Transient Quarters	1945
Building 135	Housing/FH LTC/MAJ	1947
Building 136	Housing/FH LTC/MAJ	1947
Building 137	Housing/FH LTC/MAJ	1947
Building 138	Housing/FH LTC/MAJ	1947
Building 139	Housing/FH LTC/MAJ	1947
Building 145	Storage/Det Storage FH	1978
Building 146	Storage/Det Storage FH	1978
Building 148	Storage/Det Storage FH	1978
Building 150	Storage/Det Storage FH	1978
Building 152	Storage/Det Storage FH	1978
Building 201	Pump House	1942
Building 205	Communication/Class VI Store	1942
Building 207A	Storage/3rd Military Police (CID)	1942
Building 207B	Storage/USPHS/DMAT	1942
Building 208A	Storage/ISSD Supply	1942
Building 208B	Storage/ISSD Supply	1942
Building 209A	Storage/81st RSC	1943
Building 209B	Storage/DIS Hazmat	1943
Building 210A	Storage/988 QM Co	1943
Building 210B	Communication/AAFES Exchange	1943
Building 211A	Storage/221 Mi Co	1943
Building 211B	Storage/3 USA Sup/Comm	1943
Building 212A	Storage/FEMA	1942
Building 212B	Storage/FEMA	1942
Building 213A	Storage/DOIM Pubs/Training	1942
Building 213B	Operations/CID Lab	1942
Building 214A	Communication/Commissary	1942
Building 214B	Storage/VA Medical Storage	1942
Building 224	Storage/ECS 43	1942
Building 226	Utility/Sewage Treatment	1942
Building 301	Operations/Deputy Commanders Office	1942
Building 304A	Storage/AAFES Distribution	1942
Building 304B	Storage/AAFES Distribution	1942
Building 305A	Storage/AAFES Distribution	1942
Building 305B	Storage/AAFES Data Pro	1942
Building 306A	Storage/AAFES Distribution	1942
Building 306B	Storage/AAFES Distribution	1942
Building 307A	Storage/Training Support Center	1942
Building 307B	Storage/Training Support Center	1942
Building 308A	Storage/AAFES Distribution	1942
Building 308B	Storage/AAFES Distribution	1942

Building Number	Design Use Description	Construction date
Building 309A	Storage/AAFES Distribution	1942
Building 309B	Storage/AAFES Distribution	1942
Building 310A	Storage/AAFES Distribution	1942
Building 310B	Storage/427th Med Bn	1942
Building 312	USA Motor Pool	1942
Building 321	Storage/Ammo Storage	1942
Building 322	Storage/Ammo Storage	1942
Building 323	Storage/Ammo Storage	1942
Building 324	Storage/Ammo Storage	1942
Building 325	Storage/Ammo Storage	1942
Building 326	Storage/Ammo Storage	1942
Building 327	Training/81 RSC Log Training	1942
Building 335	Communication/Restroom	1942
Building 400	Maintenance/Auto Repair Shop	1952
Building 401	Maintenance/ECS 43 Maintenance SH	1953
Building 406	Storage/ECS 43 Storage	1943
Building 407	Maintenance/1015 Maintenance Co	1942
Building 408	Storage/81st RSC	1942
Building 409	Storage/ECS 43 Storage	1942
Building 410	Storage/ECS 43 Storage	1942
Building 411	Storage/81st RSC	1942
Building 424	Utility/Pump House	1943
Building 434	Utility/Pump House	1942
Building 443	Utility/Pump House	1942
Building 454	Utility/Pump House	1942
Building 464	Utility/Pump House	1942
Building 473	Utility/Pump House	1942
Building 499	Maintenance/Sandblast Facility	1960
Building 501	Operations/Coast Guard	1943
Building 505	Storage/AAFES Administration	1942
Building 506	Storage/AAFES Bulk Storage	1942
Building 507	Storage/AAFES Bulk Storage	1942
Building 508	Storage/AAFES Bulk Storage	1942
Building 509	Storage/AAFES Bulk Storage	1942
Building 510	Storage/AAFES Hazmat	1942
Building 511	Storage/AAFES Bulk Storage	1942
Building 512	Storage/AAFES Bulk Storage	1942
Building 513	Storage/AAFES Bulk Storage	1942
Building 514	Storage/AAFES Receiving	1942
Building 515	Storage/FORSCOM Storage	1942
Building 517	Storage/FAA Storage	1971

Building Number	Design Use Description	Construction date
Building 600	Military Police/Military Police Dog Training Facility	1952
Building 604	Operations/COMM Dispatch	1942
Building 608	Storage/81st ^t RSC	1942
Building 609	Storage/FEMA Logistics Center	1942
Building 610	Maintenance/AAFES Transportation	1942
Building 611	Storage/ Maintenance/DOL Building	1957
Building 613	Communication/Restroom	1957
Building 615	Utility/COMMO Substation	1959
Building 617	Operations/GSA Fleet Management	Not available
Building 619	Operations/GSA Maintenance Center	Not available
Building 704	Administration/AMEDD Recruit	1942
Building 733	Utility/Sewage Pump	Not available
Building 734	Communication/Chapel	1942
Building 736	Operations/52 nd Ord Group	1942
Building 738	Communication/Chapel Annex	1942
Building 739	Storage/52 nd Ord Storage	1950
Building 742	Communication/Rel Activity Center	1942
Building 757	Communication/Swim Pool House	1956
Building 813	Operations/723 Ord Dayrm	1942
Building 814	Operations/723 Ord Admin	1942
Building 815	Storage/Unknown	Not available
Building 817	Storage/184 Ord Bn S-3	1942
Building 818	Operations/184 Ord BN S-1	1942
Building 819	Training/184 Ord BN S-4	1942
Building 820	Operations/184 Ord Supply	1942
Building 822	Operations/723 Ord Co Sup	1942
Building 839A	Training/Intel Classroom	Not available
Building 841	Operations/2 nd Recruit BDE	1942
Building 902	Training/Comm Training Center	1944
Building 929	Utility/WTR TWR Pump	1942
Building 938	Military Police/Military Police Guard Building	1967

A comprehensive or programmatic report for the Property identifying current quantities of lead-based paint does not exist. Due to the age of Fort Gillem, many of the buildings contain lead-based paint. No records have been found indicating lead remediation or abatement projects. Unfortunately, documentation of renovations or abatement activities are not always maintained

on file or annotated on drawings. The only documentation found was in the form of wipe sampling conducted to identify LBP in place. Thus, the number of buildings or building components containing LBP within the Property may be less than that identified in building records and this report.

5.9 Radioactive Material

A total of 21 buildings (series of buildings that comprise a complex facility were counted as a single entity) and three outdoor areas at Fort Gillem were investigated as areas where radioactive material was potentially used, stored, or disposed. The buildings and outdoor areas included building Nos. 110, 208B, 209, 213, 310B, 400, 401, 505-516, 601B, 708, 710, 714, 737, 813-822, 914, 922, 925, 935, former coal pile, former ore/tin ingot pile, and the NLA.

Historical information was reviewed to determine if there was sufficient data to declare buildings as “Impacted” or “Non-Impacted” in accordance with Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) methodology. According to MARSSIM, areas are divided into risk categories defined as follows:

Impacted (MARSSIM Class 1 and 2) – Areas with moderate to high probabilities of potential contamination.

Impacted (MARSSIM Class 3) – Areas with very low potential for contamination but with insufficient information to justify a non-impacted classification.

Non-Impacted (No Survey Needed) – Areas with no potential for residual contamination.

Table 5-8 presents a list of buildings and areas with a history of radioactive material use and/or storage and their current conditions.

Table 5-8

List of Buildings/Areas with Radioactive Material Use/Storage History at Fort Gillem

Building Number	Classification	Building/Area Name & Use	Current Tenant and Conditions
110	Non-Impacted	TMDE Support Center, electronic instrument repair	Existing, run by Goodyear Electronics

208B	Impacted, MARSSIM Class 3	Directorate of Logistics Turn-In and Receiving Section, General Receiving, Storage, and Issue Warehouse	Existing, Current operations in this building are contracted through Unified Consultants Group. Contractors occupying bays include Logistics Intelligence (data records/inventories), Third Army (clothing and equipment), a Reserve Installation Supplier, and a contractor involved with outgoing transportation of materials
209	Non-Impacted	Pharmacy	Existing, HazMat Pharmacy
213	Non-Impacted	Old CID Laboratory	Existing, Administrative space for Criminal Investigation Command (CID)
310B	Impacted, MARSSIM Class 3	Building operated as a warehouse for receiving, storing, and shipping excess materials under a variety of names, including the Defense Logistics Agency Defense Property Disposal Office, DRMO, and Consolidation Acceptance Point (CAP).	Existing, Building has several tenants, including CAP, Unified Consultants Group, and the AAFES PMG. A Staging Yard operated by CAP (formerly by DRMO) is located outside of Bldg. 310.
400	Impacted, MARSSIM Class 3	Electronic Maintenance Shop	Existing, One small shop on the first floor houses the Electronics Maintenance Shop
400	Impacted, MARSSIM Class 1	Radioactive Waste Storage	Existing, conex used by garrison for storage of radioactive material until it can be disposed of
400	Non-Impacted	Sandblast Area	Existing, still used for Sandblast
401	Impacted, MARSSIM Class 3	Old Electronics Maintenance Room	Existing, Vehicle Maintenance
505-516	Non-Impacted	Large series of warehouses	Existing, operated by AAFES
601B	Non-Impacted	Old EOD 13th Detachment	Demolished
708, 710, 714	Impacted, MARSSIM Class 3	52nd EOD Buildings	Existing, Recently built for 52nd EOD
737	Non-Impacted	Safety Office	Demolished
813-822	Impacted, MARSSIM Class 3	13th Ordnance Detachment - EOD	Existing, Unoccupied
914	Non-Impacted	Unknown	Demolished
922	Non-Impacted	Instrument Repair Shop	Demolished
925	Non-Impacted	Current CID Lab	Existing, Building has been recently constructed for use as the Criminal Investigation Laboratory (CIL)
935	Impacted, MARSSIM Class 3	General Aircraft Instrument Repair Shop	Demolished, Area currently used by FEMA for staging trailers and supplies (no radiological materials).
N/A	Non-Impacted	Coal Pile	Vacant Lot

N/A	Impacted, MARSSIM Class 3	Landfill	Existing
N/A	Non-Impacted	Ore Pile/Tin Ingots	Building 516 was constructed over the area that had been indicated as the former location of the ore pile.

A copy of the Cabrera Services, Inc. radiological Historical Site Assessment is included as Addendum 1.

5.10 Historical Landfills/Dumps

One disposal pit and six burial sites were developed and historically used at the Property. Most of the disposal sites were out of use by the 1960s to early 1970s, with one in use (NLA) until about 1980. These seven disposal sites have been investigated under the IRP and are discussed in Section 5.2.1. Table 5-8 is a summary of the disposal sites.

**Table 5-9
Summary of Disposal Sites at Fort Gillem**

Historic Disposal Sites at Fort Gillem (from 1994 HRS Scoring Evaluation)		
Site	Type	Area (ft²)
Southeast Area Dump Site (IRP Site FTG-02)	Dump	75,000
Burial Site #1 (IRP Site FTG-07)	Landfill	45,000
Burial Site #2 (IRP Site FTG-08)	Landfill	12,560
Burial Site #3 (IRP Site FTG-09)	Landfill	12,560
Burial Site #4 (IRP Site FTG-10)	Landfill	120,000
North Landfill Area (IRP Site FTG-01)	Landfill	993,000
900 Area Solvent Disposal Pit (IRP Site FTG-04)	Disposal Pit	5,024

5.11 Explosive-Contaminated Structures

No surface contamination from explosives has been observed or is anticipated.

5.12 Radon

According to the EPA’s categorization of radon zones, Clayton County, Georgia, is qualified as a radon Zone 2, meaning that it has a predicted average indoor radon screening level greater than or equal to 2 picocuries per liter (pCi/L), and less than or equal to 4 pCi/L. The EPA’s action level for radon is 4 pCi/L.

A radon survey was conducted for Priority 1 and Priority 2 buildings during 1990. All detections for radon were below the 4 pCi/L action level, with the exception of Building 142 (family housing unit), which had a level of 4.8 pCi/L.

Additional buildings were scheduled to be tested in 1991; however, no results were found during the file review.

5.13 Pesticides

The Property historically had pesticide mixing and storage in Building 116. The building has since been demolished. No additional information is available regarding the building. A 1997 USACHPPM inspection noted a pesticide storage area in Building 310. The inspection noted the floor of pesticide mixing and storage areas was not properly sealed and could leak. Currently, there are no pesticide mixing and storage facilities at Fort Gillem; pesticide mixing and storage is conducted at nearby Fort McPherson.

Pest management is performed under a 2003 installation pest management plan. Pesticides proposed for use at the Installation in 2005 are listed in the pesticide management plan (U.S. Department of Army, 2003).

5.14 Other Identified Concerns

- The 1980 installation assessment (USATHAMA) states that some buried wastes were disposed of in flood plain areas in close proximity to perennial streams. Problems have arisen in the past with these materials; some materials exposed by erosion have washed off the installation, prompting complaints from citizens in surrounding residential areas. Construction of coffer dams and erosion control structures in the floodplains completed in the 1990s stabilized the areas of the landfills prone to erosion along these perennial streams. In the future, however, the erosion control structures must be adequately maintained to prevent buried wastes from entering the streams.
- Marchman Lake is a man-made lake located in the south-central portion of Fort Gillem adjacent to the installation boundary and west of the Southeast Burial Sites. It is periodically stocked with fish and is used for recreational purposes. The lake has not been part of the IRP, although sporadic sampling of the lake dates to the late 1970s. In 1978, the U.S. Army Environmental Hygiene Agency investigated the cause of a fish kill in the lake. Marchman Lake was found to be extremely

eutrophic due to fish feeding practices and resulting heavy algal growth (USATHAMA, 1980). The study concluded that the fish kill was caused by drought conditions, with resulting high water temperatures and low concentrations of dissolved oxygen. The lake bottom was reshaped in 2000 or 2001 to remove shallow water areas that were causing stagnate water and promoting low oxygen levels. This dredging may have removed any potential sediment contamination in Marchman Lake. No contamination was found in the most recent water samples collected in September 2004 (USACE, 2004).

- Building 101 was a former incinerator facility that included a battery room. All batteries were removed from the building in 1999 and installation personnel had no knowledge of environmental conditions associated with the battery room. No further information was available regarding the incinerator.

5.15 Identification of Uncontaminated Property

The U.S. Army's ECP process characterizes the existing environmental conditions at a given site. Properties were classified according to their environmental condition based on DOD guidance into the following categorization:

The majority of the Property areas were identified as "uncontaminated" property comprising approximately 731.5 acres. These were areas in which no release or disposal of hazardous substances or petroleum products had occurred, and to which there had been no migration of such substances from adjacent areas. Historical records reviewed and the VSI found no indication that the release or disposal of hazardous substances or their derivatives has occurred, including no migration of these substances from adjacent areas at the following properties:

- Unexploded Ordnance Disposal Site (FTG-11)
- USTs that had no evidence of contamination at Buildings 308, 309, 505, and 512
- Oil/water separators
- ASTs at Buildings 119, 605 and 900
- Hazardous waste collection areas
- Most of the buildings on the Property except four buildings: Buildings 101, 105, 116, and 310
- Marchman Lake

- Training areas where no munitions were utilized
- The majority of the areas on the Post, Parcels 25(1) and 28(1).

5.16 Description of Remaining Property

Parcel numbering was assigned to each existing Installation Restoration Program (IRP) site, non-IRP sites, petroleum release areas and any identified area of concern as follows:

- **Category 2 - Areas in which only release or disposal of petroleum products has occurred.** Areas measuring approximately 248 acres were classified as category 2 property. Category 2 parcels included tanks where there was evidence of contamination or no information was available regarding the status of the tanks.
- **Category 3 - Areas in which release, disposal or migration of hazardous substances has occurred, but in concentrations that do not require a removal or other remedial response.** Category 3 areas included five IRP sites; the Southeast Area Dump Site (FTG-02), 900 Area Industrial Waste Water Treatment Plant (FTG-03), 900 Area Vehicle Wash Rack (FTG-06), Burial Site No. 2 (South Street and Boundary Road) (FTG-08), Eastern Sewage Treatment Plant (FTG-14), the area on the western portion of the Property with underlying groundwater plumes and flood plain areas close to perennial streams. Category 3 area measures approximately 54 acres.
- **Category 4 - Areas in which release, disposal, or migration of hazardous substances has occurred, but all removal or other remedial actions necessary to protect human health and the environment have been taken.** One IRP site, 900 Area Heating Plant, measuring approximately 2 acres was identified as Category 4 property.
- **Category 5 - Areas in which release, disposal, or migration of hazardous substances has occurred, and removal or other remedial actions are under way, but all required actions have not yet been taken.** One IRP site, 900 Area Solvent Disposal Pit, measuring approximately 8 acres was identified as Category 5 property.
- **Category 6 - Areas in which release, disposal, or migration of hazardous substances has occurred, but required remedial actions have not yet been implemented.** Areas measuring approximately 379 acres were classified as category 6 property. These included five IRP sites; FTG-01, North Landfill Area; FTG 07, Burial Site #1; FTG-09, Burial Site #3; FTG-10, Burial Site #4; and FTRG-13, Western Sewage Treatment Plant.
- **Category 7 - Areas that have not been evaluated or require additional evaluation.** Areas measuring approximately 4.5 acres were classified as

category 7 property. Category 7 property included the former incinerator (Building 101), the former gas pump (Building 105), the storm water outfalls, Training Area 1 including the former Skeet Trap range, and the pesticide storage areas.

Areas of the Property that contained other environmental or safety issues, including asbestos, lead-based paint, PCBs, radon, and radionuclides have also been identified in separate ECP Category 1 qualified parcels. Parcels with qualifying issues overlap ECP Category 1 through 7 parcels.

Of the total 1,427 acres of the Property occupied by Fort Gillem, 238 acres will be retained by the Army as a Reserve Enclave. Fort Gillem currently provides warehouse and office space measuring approximately 247 acres to FEMA in support of its disaster relief activities. The remaining 942 acres is government excess property. Nine of the parcels are included in the Reserve Enclave, five of the parcels are included in the FEMA area, and one parcel is shared between the Reserve Enclave and the FEMA areas. The remainder of the parcels is included in the government excess property.

A summary of the parcels located at Fort Gillem is attached as Table A-1. ECP Parcels and the Qualified Parcels are shown on Figures 11 and 12, respectively.

5.17 Adjacent Properties

Adjacent property use and condition were evaluated by a VSI conducted on 3 July 2006.

Residential property bounds Fort Gillem to the north. The development north of FTG-01 consists primarily of single-family houses in an established neighborhood that was likely built in the 1960s based on observation of the style and condition of the structures. Several residential developments north of the installation are currently under construction.

Moreland Avenue bounds the eastern side of Fort Gillem and largely consists of mixed commercial/industrial properties. Several trucking companies, restaurants, and a gasoline station are among the properties. The Georgia Army National Guard facility is adjacent to the southeastern corner of the installation.

Jonesboro Road bounds the western and southwestern side of Fort Gillem and mainly consists of commercial properties. A gasoline station, several restaurants, and other small businesses are among the properties. The former location of Sammons Septic Tank Service on Courtney Drive, mentioned in Chapter 3.0 as a potential source of contamination migrating on to Fort Gillem, is

now a hardware store. Adjacent to the south of Courtney Drive is a Norfolk Southern railroad right-of-way; one line runs onto Fort Gillem parallel to Hood Avenue.

A mixture of residential, commercial, and industrial development bounds Fort Gillem to the south. The development south of FTG-07 and FTG-09 on either side of Joy Lake consists primarily of single-family houses in an established neighborhood that was likely built in the 1950s and 1960s based on observation of the style and condition of the structures. Several residential developments north of the installation are currently under construction. A gasoline station/convenience store is adjacent to and south of Joy Lake. Properties along Forest Parkway include single-family houses, a trucking company, and a mixture of commercial businesses.

6.0 Conclusions

6.1 Off-Property

Previous environmental investigations have documented off-post surface water and groundwater contamination by VOCs (particularly TCE and 1,1,2,2-tetrachloroethane) originating from five of the six active IRP sites. This off-Property contamination is a REC.

The working conceptual site model for Fort Gillem suggests that contaminated groundwater discharges or upwells into the shallow surface water drainage features where the drainage feature intersects the groundwater plume. As such, groundwater plumes migrating off post typically create associated off-post surface water contamination.

FTG-01 and FTG-09 Sites. Relatively large and concentrated (maximum concentrations exceeding 100 times the maximum contaminant level) off-post groundwater plumes have originated from the FTG-01 and FTG-09 sites.

Surface water and groundwater contamination by chlorinated solvents was associated with the FTG-01 site in the late 1990s. Ongoing delineation of this contamination indicates there are three separate groundwater/surface water plumes. The westernmost plume exits the post along the northwestern corner of the installation. The primary contaminant in this area is TCE. A second off-post plume exists, originating from the central portion of the FTG-01 site. This groundwater and surface water plume is migrating off post, parallel to the course of the western stream. Primary VOCs within this plume are TCE and 1,1,2,2-tetrachloroethane. A third surface water and groundwater VOC plume exits the post and is migrating parallel to the eastern stream. Primary VOCs associated with this plume include chloroform and carbon tetrachloride.

As with the FTG-01 site, chlorinated VOCs originating from the FTG-09 site are migrating off post dissolved in the shallow groundwater and are discharging into the surface water bodies south of the southern post boundary. A relatively large (approximately 1 mile long) and concentrated (maximum concentration of TCE greater than 1,000 micrograms per liter) groundwater plume is associated with the off-post portion of the FTG-09 site.

FTG-04, FTG-07 and FTG-13. TCE in groundwater has also migrated off post from the FTG-04, FTG-07, and FTG-13 sites. Concentrations of VOCs in groundwater and surface water samples indicate the off-post plumes associated with this three sites are smaller and much less concentrated than the off-post plumes originating from the FTG-01 and FTG-09 sites.

Off-Post Domestic Well Sampling. In the early 1990s, the Army sampled domestic wells at 18 off-post residences. Although the detected concentrations were low (below or equal to maximum contaminant levels) and the locations were not downgradient of the IRP sites, the Army provided connections to municipal water supplies to residents at these locations. The Army completed additional sampling of domestic wells in 2001 and 2002. Well surveys have determined that no wells are currently in use by residents near the installation. The existing domestic wells have not been abandoned, however, and the open status of the domestic wells could pose a potential liability.

Adjacent Properties: Potential environmental sites of concern, located adjacent to the Property, were evaluated. Sammons Septic Tank Service, in operation from 1950 to 1984, was located southwest and approximately 1,000 feet upgradient of the southwestern portion of Fort Gillem. Information obtained during the records search suggests that potentially hazardous sludges were handled and disposed of on the property in the 1970s. Some runoff may have occurred to the Fort Gillem property, therefore, this facility is considered a REC.

Erosion of Buried Wastes. The 1980 installation assessment (USATHAMA) states that some buried wastes were disposed of in floodplain areas in close proximity to perennial streams. Problems have arisen in the past with these materials; some materials exposed by erosion have washed off the installation, prompting complaints from citizens in surrounding residential areas. Construction of coffer dams and erosion control structures in the floodplains completed in the 1990s stabilized the areas of the landfills prone to erosion along these perennial streams. In the future, however, the erosion control structures must be adequately maintained to prevent buried wastes from entering the streams. This buried waste is considered a REC.

6.2 On Property

Of the 1,427 acres of the Property, 238 acres will be retained by the Army as a Reserve Enclave. The area utilized by FEMA encompasses approximately 247 acres. The remaining area is government excess property.

Installation Restoration Program. Fort Gillem has an ongoing IRP which was initiated in 1980 with the installation assessment (USATHAMA, 1980). The IRP initially identified 14 sites, designated FTG-01 through FTG-14. FTG-12 included USTs, which were not handled under the IRP. The 13 remaining sites were determined to require investigation under the IRP. Response complete has been attained for seven of these sites (Table 5-2). The other six sites remain open and include the following:

- FTG-01, NLA
- FTG-04, 900 Area Solvent Disposal Pit
- FTG-07, SEBS, Burial Site No. 1
- FTG-09, SEBS, Burial Site No. 3
- FTG-10, SEBS, Burial Site No. 4
- FTG-13, Western Sewage Treatment Plant.

These six sites are included in a performance-based contract awarded by the Army in fiscal year 2005. The current scope of the performance-based contract is to take five of the sites to remedy in place (FTG-01, FTG-04, FTG-07, FTG-09, and FTG-13) and the sixth site (FTG-10) to RC by 30 September 2007.

Installation restoration activities at FTG-01 are being conducted under an administrative order from the GA EPD issued 10 September 1993 (IAP, 2006). The administrative order placed FTG-01 in the Hazardous Response Site Act program; however, GA EPD agreed in 2005 to let the Army address the site following the CERCLA process. The other sites are being investigated voluntarily under the Defense Environmental Restoration Program, which is consistent with the CERCLA process.

Elevated concentrations of chlorinated solvents, principally TCE and 1,1,2,2-tetrachloroethane, are present in groundwater and have migrated off site at significant concentrations from FTG-01 on the north side of the installation and from FTG-09 on the southeast side of the installation. TCE in groundwater has also migrated off-site at FTG-04 and FTG-13, both on the north side of the installation, but at lower concentrations.

The stated objectives of the RI work plans for FTG-01, FTG-04, and FTG-13 (Shaw, 2006c, d) are to further delineate the extent of on-post soil (excluding FTG-04) and on- and off-post groundwater and surface water contamination by VOCs, particularly TCE, 1,1,2,2-tetrachloroethane, and chloroform. The six IRP sites constitute a REC.

Response complete has been attained for seven of the IRP Sites including:

- FTG-02, Southeast Area Dump Site
- FTG-03, 900 Area Industrial Wastewater Treatment Plant
- FTG-05, 900 Area Heating Plant
- FTG-06, 900 Area Vehicle Wash Rack
- FTG-08, SEBS, Burial Site #2
- FTG-11, Unexploded Ordnance Site
- FTG-14, Eastern Sewage Treatment Plant.

The Army has requested no further action from GA EPD on six of the seven sites; however, GA EPD to date has not provided concurrence or approval.

Range Operations. Eleven operational ranges were identified at the Fort Gillem property. Of the identified ranges, only 2 had a history of munitions use. Munitions were historically used at the former Skeet and Trap Range and former Pistol Range. The former Skeet and Trap Range was constructed in approximately 1974 and used for recreational shooting. It was located on the southeast portion of Training Area 1, just north of the former airstrip, in the southwest portion of the North Landfill Area. The former Pistol Range was located in Training Area 2 within the North Landfill Area (FTG-01). Soil samples were collected at the Pistol Range in the mid-1990s, and these data will be incorporated into the baseline risk assessment for the North Landfill Area, which is currently being prepared. Only the former Skeet and Trap Range and the former Pistol Range constitute a REC.

Storm Water Outfalls. Some operations have historically discharged wastewater to storm drains without permits. This could have deposited recalcitrant contaminants at storm water outfalls. Eighteen outfalls are located on the installation and six outfalls are associated with industrial activities. The industrial activities include vehicle maintenance (Outfalls 249, 228, 183, and 129); fueling (Outfalls 190 and 183); hazardous waste storage (Outfall 86); materials storage (Outfall 129); and sandblasting (Outfall 183). These outfalls associated with industrial activities constitute a REC.

Hazardous Substances and Hazardous Waste. Several hazardous substances associated with base operations at the property include strong acids, bases, solvents, heavy metals, and materials associated with laboratory operations and building maintenance. Identified hazardous substances include arsenic, asbestos, cadmium and cadmium hydroxide, chlorine, ethylene glycol, mercury, nickel hydroxide, sulfuric acid, and xylene. Fort Gillem currently maintains hazardous material data in the HMMS. Fort Gillem's HMMS team collects data on hazardous materials and hazardous waste from all agencies that handle these substances at Fort Gillem for input to the HMMS.

Currently hazardous substance disposal is reported by various departments and tenants for input into the HMMS system as substances are received and disposed. This information is used to facilitate centralized hazardous material control and management and to assist with

environmental reporting. Hazardous chemicals stored in quantities greater than the storage quality threshold include ethylene glycol, and sulfuric acid.

Hazardous waste is stored at Fort Gillem in a 90-day yard and various SAP. Under the State of Georgia regulations, SAP cannot accumulate more than 55-gallons at a time and once the amount is exceeded, the excess waste must be moved within 3 days to a 90-day area. After 90 days the waste must be transported off-post by licensed hazardous waste transporters.

Various buildings operate as SAP that regularly store solvents, acids, paints, toxins, aerosols, metals, mercury and other hazardous substances.

Petroleum Substances-USTs/ASTs. There are currently eight (8) active USTs and twenty six (26) active ASTs present at the property. A total of fifty six (56) USTs and two (2) ASTs have either been removed or closed in place. The tanks were primarily used for the storage of gasoline, diesel fuel, heating oil, and waste oil. Following is a summary of the available documentation for historic and current tanks at the property:

- During tank removal activities, there was either no evidence of soil contamination or soil contamination was above detection limits but below regulatory limits at eleven UST sites. All removed tanks at Buildings 307 (one [1] tank), 308 (one [1] tank), 309 (one [1] tank) 310 (one [1] tank) , 404 (two [2] tanks), 505 (one [1] tank), 512 (one [1] tank), 925 (one [1] tank), and one tank each at Buildings 106 (the tank had no documented label), 213 (one tank, 213-FO4), and Building 403 (one tank, 403-1). These former UST locations do not constitute a REC.
- During tank removal activities, soil contamination was detected at the following sites, however remedial actions were completed or are currently ongoing:
- Soil removal, often with over excavation, was conducted at Buildings 101 (four [4] tanks), 111 (two [2] tanks), 114 (one [1] tank), 210 (one [1] tank), 214 (one [1] tank), 312 (two [2] tanks), 507 (two [2] tanks), 511(one [1] tank), 931 (one[1] tank) and for two (2) tanks located at Building 213 (two [2] tanks, 213-FO2 and 213-FO3) . These former UST locations do not constitute a REC.

- Remedial activities are currently ongoing at five buildings; Buildings 401 (five [5] tanks), 504 (four [4] tanks), 606 (three [3] tanks), 610 (two [2] tanks), and T-926 (number of tanks not available). These former UST locations are considered a REC.
- Although soil contamination was detected during tank removal activities associated with Buildings 305 (one [1] tank) and 935 (two [2] tanks), no documentation regarding remedial activities was available for review. These former UST locations are considered a REC.
- There was no available documentation regarding the status of the tanks at six of the UST locations. The locations included Buildings 304 (one [1] tank), 400 (four [4] tanks), 406 (one [1] tank), 737 (one [1] tank), 106 (three [3] tanks) and 403 (one [1] tank). These former UST locations are considered a REC.
- There were no documented releases for any of the former or active ASTs at the property. Visual site inspections of the current aboveground storage tanks did not reveal any evidence of leaks or spills. No RECs are associated with the current or former AST locations.
- A gas station was located in the former Building 105. The building was demolished in the early 1990s. No documentation was available regarding the status of the site. This site constitutes a REC.

Cleanup was conducted at nine of the UST sites (Buildings 101, 111, 312, 401, 504, 606, 610, T-926, and 931) at Fort Gillem that are listed in the GA EPD leaking UST program. Buildings 101, 111, 312, and 931 are listed as no further action sites, Buildings 401, 504, 610, and T-926 are listed as clean-up initiated and Building 606 is listed as a monitoring only site.

Asbestos-Containing Materials. Between 1994 to 2005, ACM surveys were conducted in 20 buildings. Of the 20 structures surveyed, 19 have ACM survey results documentation; 15 were found to have both friable and non-friable asbestos; and 4 structures were found to have only non-friable asbestos. All structures with reported asbestos have an asbestos operation and maintenance plan in place. There are 164 buildings on the Property that have no documentation of asbestos surveys performed.

Lead and Lead-Based Paint. In November 2002, surface dust sampling was conducted in family housing to assess lead concentration in dust. A total of 53 samples collected in 5 buildings (135 through 139) indicated that there were no lead dust levels above regulatory limits. No documentation of lead dust sampling was found for five family housing buildings (131, 133, 134, 301, and 828) constructed prior to 1978.

Many of the facilities and buildings at the Property were constructed before the DOD ban on the use of lead-based paint in 1978 and are likely to contain one or more coats of such paint. In addition, some facilities constructed immediately after the ban may also contain lead-based paint, because inventories of such paints that were in the supply network were likely to have been used at these facilities.

Radiological Materials. As reported in the 2007 Historical Site Assessment, ten (10) buildings/complexes and one (1) outdoor area at Fort Gillem from the above table were found to be impacted from historical use of radioactive materials (RAM) (Cabrera, 2007). The buildings and outdoor area classified as impacted include building Nos. 208B, 310B, 400 (Electronic Maintenance Area and waste storage box only), 401, 708, 710, 714, 813-822, 935, and the NLA. Based upon the found radiological impacts, these areas constitute a REC.

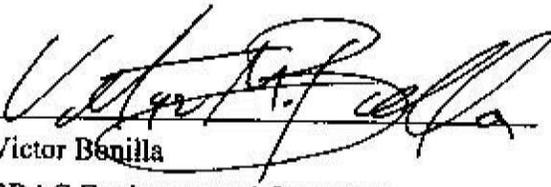
Radon. A radon survey was conducted for Priority 1 and Priority 2 buildings during 1990. All detections for Radon were below the 4 pCi/L action level, with the exception of Building 142 (family housing unit), which had a level of 4.8 pCi/L. According to the EPA's categorization of radon zones, Clayton County, GA is qualified as a radon zone 2, meaning that it has a predicted average indoor radon screening level greater than or equal to 2 pCi/L, and less than or equal to 4 pCi/L. The EPA's action level for radon is 4 pCi/L.

Pesticides. The Property historically had pesticide mixing and storage in Building 116. The building has since been demolished. No additional information is available regarding the building. A 1997 USACHPPM inspection noted a pesticide storage area in Building 310. The inspection noted the floor of pesticide mixing and storage areas was not properly sealed and could leak. Buildings 116 and 310 constitutes a REC.

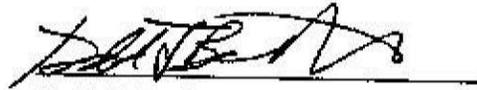
Other Issues. Building 101 was a former incinerator facility. No information regarding the incinerator was available. Building 101 constitutes a REC.

7.0 Certification

All information/documentation provided accurately reflects the condition of the property. This report meets the DoD requirements for completion of an ECP Report.



Victor Banilla
BRAC Environmental Coordinator
Fort Gillem



Todd T. Beckwith, P.E.
Restoration Manager
U.S. Army Environmental Center

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APPENDIX A

ECP PARCELS
AND
2006 VISUAL SITE INSPECTION APPROACH SUMMARY

APPENDIX B
AERIAL PHOTOGRAPHY ANALYSIS

APPENDIX C
SANBORN MAPS

APPENDIX D
HISTORICAL TOPOGRAPHIC MAPS

APPENDIX E
REGULATORY DATABASE REPORT (EDR REPORT)

APPENDIX F
JURISDICTION SUMMARY

APPENDIX G
INTERVIEW REPORTS

APPENDIX H
TRANSFORMER UPGRADE DOCUMENTATION

ADDENDUM 1

HISTORICAL SITE ASSESSMENT AND ADDENDUM TO ENVIRONMENTAL CONDITION OF PROPERTY REPORT