

**MEMORANDUM FOR RECORD**

**SUBJECT:** Draft Remedial Investigation Report, Small Weapons Repair Shop, Parcel 66(7), May 2002

1. Subject draft report will not be finalized by the U.S. Army. It is maintained in the Administrative Record and Information Repositories to provide information collected by the Army prior to implementation of the Environmental Services Cooperative Agreement (ESCA) between the Army and the Anniston-Calhoun County Fort McClellan Development Joint Powers Authority (JPA) executed on 15 September 2003, and as modified on 30 September 2005. The JPA will complete environmental services and achieve site closeout in accordance with the requirements of the ESCA.
2. Point of contact for this action is Lisa Holstein, Transition Force, Fort McClellan, AL, at 256-848-7455.



May 17, 2002

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IT-MC-CK10-0213

Project No. 796887

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**Contract: Contract No. DACA21-96-D-0018/CK10  
Fort McClellan, Alabama**

**Subject: Draft Remedial Investigation Report, Small Weapons Repair Shop, Parcel 66(7)**

Dear Mr. Pope:

I am enclosing one copy of the subject document for your review. This draft report describes the activities and conclusions of the remedial investigation that IT conducted at the Small Weapons Repair Shop, Parcel 66(7). The Parcel 66(7) RI results were presented to the BCT at the December 2001 BCT meeting. During that meeting, the BCT agreed that sufficient data had been collected and that site characterization was complete.

At your request, I have distributed copies of this document as indicated below. If you have questions, or need further information, please contact me at (770) 663-1429 or Steve Moran at (865) 694-7361.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jeanne A. Yacoub', is written over the typed name.

Jeanne A. Yacoub, P.E.  
Project Manager

**Attachments**

**Distribution:** Lisa Holstein, FTMC (7 copies)  
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**Draft**

**Remedial Investigation Report  
Small Weapons Repair Shop, Parcel 66(7)**

**Fort McClellan  
Calhoun County, Alabama**

**Prepared for:**

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**Task Order CK10  
Contract No. DACA21-96-D-0018  
IT Project No. 796887**

**May 2002**

**Revision 0**

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## ***Executive Summary***

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In accordance with Contract Number DACA21-96-D-0018, Task Orders CK05 and CK10, IT Corporation completed site investigation (SI) and remedial investigation (RI) activities at the Small Weapons Repair Shop, Parcel 66(7), at Fort McClellan in Calhoun County, Alabama. The SI determined that contamination was present at Parcel 66(7); therefore, the RI was conducted to evaluate the nature and extent of the contamination and to assess future risks to human health and the environment.

Parcel 66(7) was originally investigated as a part of the SI for the Former Ordnance Motor Repair Area, Parcels 75(7), 5(7), 6(7), 41(7), and 42(7). There are two buildings within the boundary of Parcel 66(7), Buildings 335 and 336. The main part of Building 335 was used for tank repair; the Small Weapons Repair Shop occupied a small room on the west side of the building. The results from the SI indicated that organic chemicals (1,1-dichloroethene [DCE], cis-1,2-DCE, and vinyl chloride) were present in the groundwater at Parcel 66(7) and that additional investigation was warranted. These chemicals are believed to be associated with chlorinated solvents used during the cleaning of weapons at the Small Weapons Repair Shop and/or activities conducted associated with the repair of tanks in the main part of Building 335.

The SI and RI at the Small Weapons Repair Shop, Parcel 66(7), consisted of the sampling and analysis of three surface soil samples, three subsurface soil samples, and 19 groundwater samples. In addition, 19 groundwater monitoring wells were installed at the site to facilitate groundwater sample collection and to provide site-specific geological and hydrogeological characterization information. The samples collected during the SI were analyzed for volatile organic compounds (VOC), semivolatile organic compounds (SVOC), metals, polychlorinated biphenyls, pesticides, and herbicides. Groundwater samples collected during the RI were analyzed for VOCs only.

The residuum sequence at Parcel 66(7) consists of a clay soil layer to a depth of around 13 feet below ground surface; beneath this layer, an interval of highly weathered shale extends to around 30 feet below ground surface. The underlying competent bedrock is slightly weathered, fractured, dark gray to black shale, consistent with undifferentiated Floyd and Athens Shale. A groundwater divide exists in both the residuum and bedrock water-bearing zones; the resultant groundwater flow direction is to the north and to the south of the parcel. Groundwater velocities

1 calculated for both the residuum and bedrock were low: 0.0033 feet per day in the residuum and  
2 0.0078 feet per day in bedrock.

3  
4 In soils, a few metals were detected at concentrations exceeding residential human health site-  
5 specific screening levels (SSSL), ecological screening values (ESV), and background screening  
6 values. A statistical and geochemical evaluation concluded that the metals concentrations in  
7 soils are probably naturally occurring. Several SVOCs (all polynuclear aromatic hydrocarbon  
8 [PAH] compounds) were detected in one surface soil sample at concentrations exceeding SSSLs  
9 and/or ESVs. The occurrence of the PAHs is believed to be directly related to the asphalt surface  
10 that covers Parcel 66(7). The pesticide endrin was detected in one surface soil sample at a  
11 concentration minimally above its ESV.

12  
13 Two metals (iron and manganese) were detected in groundwater at concentrations exceeding  
14 SSSLs. The metals concentrations were below their respective background concentrations or  
15 within the range of background values. The statistical and geochemical evaluation also  
16 concluded that the metals are most likely naturally occurring. However, the manganese  
17 concentration in one of the groundwater samples may be elevated due to reductive dissolution,  
18 which is a secondary effect of the VOC contamination in groundwater at that location.

19  
20 Five chlorinated VOCs were detected in groundwater at concentrations exceeding their  
21 respective SSSLs: 1,1-DCE, 1,2- dichloroethane (DCA), cis-1,2-DCE, trichloroethene (TCE),  
22 and vinyl chloride. The contamination was restricted to two residuum monitoring wells (PPMP-  
23 66-MW02 and PPMP-66-MW06). The compounds detected represent chlorinated solvents or the  
24 breakdown products of chlorinated solvents that were used in weapon cleaning activities in the  
25 Small Weapons Repair Shop or elsewhere in Building 335. The association of these chemicals is  
26 evidence that natural attenuation of the solvents is occurring. The horizontal extent of these  
27 contaminants in residuum groundwater is defined, and contamination is verified as not present in  
28 the deeper, competent bedrock. The calculated rate and distance of solute transport for the most  
29 mobile of these chemicals (i.e., vinyl chloride) indicate that, over a 50-year period, movement of  
30 contamination beyond the parcel boundary is not likely to occur.

31  
32 A streamlined human health risk assessment (SRA) was performed to determine the potential  
33 threat to human health from exposure to environmental media at Parcel 66(7). Three receptor  
34 scenarios were evaluated in the SRA: resident, groundskeeper, and construction worker.

35 Chemicals of potential concern included five VOCs in groundwater (1,1-DCE, 1,2-DCA, cis-1,2-

1 DCE, TCE, and vinyl chloride) and four PAH compounds in soils. The SRA concluded that the  
2 concentrations of chlorinated solvents detected in groundwater present an unacceptable threat to  
3 human health. This threat is not realized unless the groundwater is developed as a potable water  
4 source. The PAHs in soils were consistent with anthropogenic background, and it was concluded  
5 that they do not represent a significant site-related threat to human health.

6  
7 A screening-level ecological risk assessment (SLERA) was performed to determine the potential  
8 threat to ecological receptors from exposure to environmental media at Parcel 66(7). The  
9 SLERA identified six metals, four PAH compounds, and one pesticide (endrin) as constituents of  
10 potential ecological concern (COPEC) in surface soils. The arithmetic mean concentrations of  
11 these constituents, however, were less than their respective background threshold values and/or  
12 ESVs. Further, statistical and geochemical evaluations of the metals results indicated that they  
13 were all naturally occurring. The PAHs in surface soil were attributed to asphalt pavement at the  
14 site rather than mission-related Army activities. The SLERA concluded that none of the  
15 COPECs presents a threat to terrestrial ecosystems at the site.

16  
17 Based on the results of the RI, further investigation of the groundwater contamination at Parcel  
18 66(7) is recommended. An additional round of groundwater samples should be collected from  
19 all wells at the site and analyzed for VOCs and natural attenuation parameters. In addition, a  
20 feasibility study is recommended to screen remedial action technologies and process options for  
21 groundwater remedial alternatives.

22

## 1.0 Introduction

---

The U.S. Army has selected Fort McClellan (FTMC), located in Calhoun County, Alabama, for closure by the Base Realignment and Closure (BRAC) Commission under Public Laws 100-526 and 101-510. The 1990 Base Closure Act, Public Law 101-510, established the process by which U.S. Department of Defense (DOD) installations would be closed or realigned. The BRAC Environmental Restoration Program requires investigation and cleanup of federal properties prior to transfer to the public domain. The U.S. Army is conducting environmental studies of the impact of suspected contaminants at parcels at FTMC under the management of the U.S. Army Corps of Engineers (USACE)-Mobile District. The USACE contracted IT Corporation (IT) to complete the remedial investigation (RI) of the Small Weapons Repair Shop, Parcel 66(7), under Contract Number DACA21-96-D-0018, Task Order CK10.

The Small Weapons Repair Shop, Parcel 66(7), was initially investigated as part of the site investigation (SI) conducted for the Former Ordnance Motor Repair Area, Parcel 75(7). Sampling for the SI at Parcel 66(7) was performed as specified in the Former Ordnance Motor Repair Area SI work plan (IT, 1998a). Based on the analytical results from the SI (1,1-dichloroethene, cis-1,2-dichloroethene, and vinyl chloride in groundwater), additional investigation was deemed necessary; hence, an RI was performed at Parcel 66(7). Field activities for the SI were initiated in January 1999 and were completed in March 1999. Field activities for the RI at Parcel 66(7) were initiated in October 2000 and completed in October 2001. This report documents the results of the SI and RI.

### 1.1 Scope and Objectives

The scope of the SI was outlined in the site-specific field sampling plan (SFSP) attachment for the Former Ordnance Motor Repair Area, Parcels 75(7), 41(7), 42(7), 5(7), 6(7), and 66(7) (IT, 1998a). The scope of the RI was outlined in the RI SFSP addendum for the Small Weapons Repair Shop, Parcel 66(7) (IT, 2000a), which was prepared to provide technical guidance for sample collection and analysis at Parcel 66(7). The SFSPs were used in conjunction with the site-specific safety and health plans as attachments to the installation-wide work plan (IT, 1998b) and the installation-wide sampling and analysis plan (SAP) (IT, 2000b). The SAP includes the installation-wide safety and health plan and quality assurance plan.

The primary objectives of this RI are to determine the nature and extent of contamination at Parcel 66(7) and to identify chemicals that pose an unacceptable risk to human health and the

1 environment. Completion of these objectives enables the support under the Installation  
2 Restoration Program (IRP) process of one or more of the four decisions presented below and in  
3 Figure 1-1.

- 4
- 5 • Preparation of an Engineering Evaluation and Cost Analysis to identify remedial  
6 action objectives and evaluate removal alternatives
- 7
- 8 • Preparation of a Feasibility Study or Focused Feasibility Study for evaluation of  
9 potential remedial measures
- 10
- 11 • Recommendation of interim remedial measures
- 12
- 13 • Preparation of a Decision Document to support no further investigation actions.
- 14

## 15 **1.2 Site Background**

16 The following sections provide site background information for both FTMC and Parcel 66(7),  
17 including previous investigations.

### 18

#### 19 **1.2.1 FTMC Site Description and History**

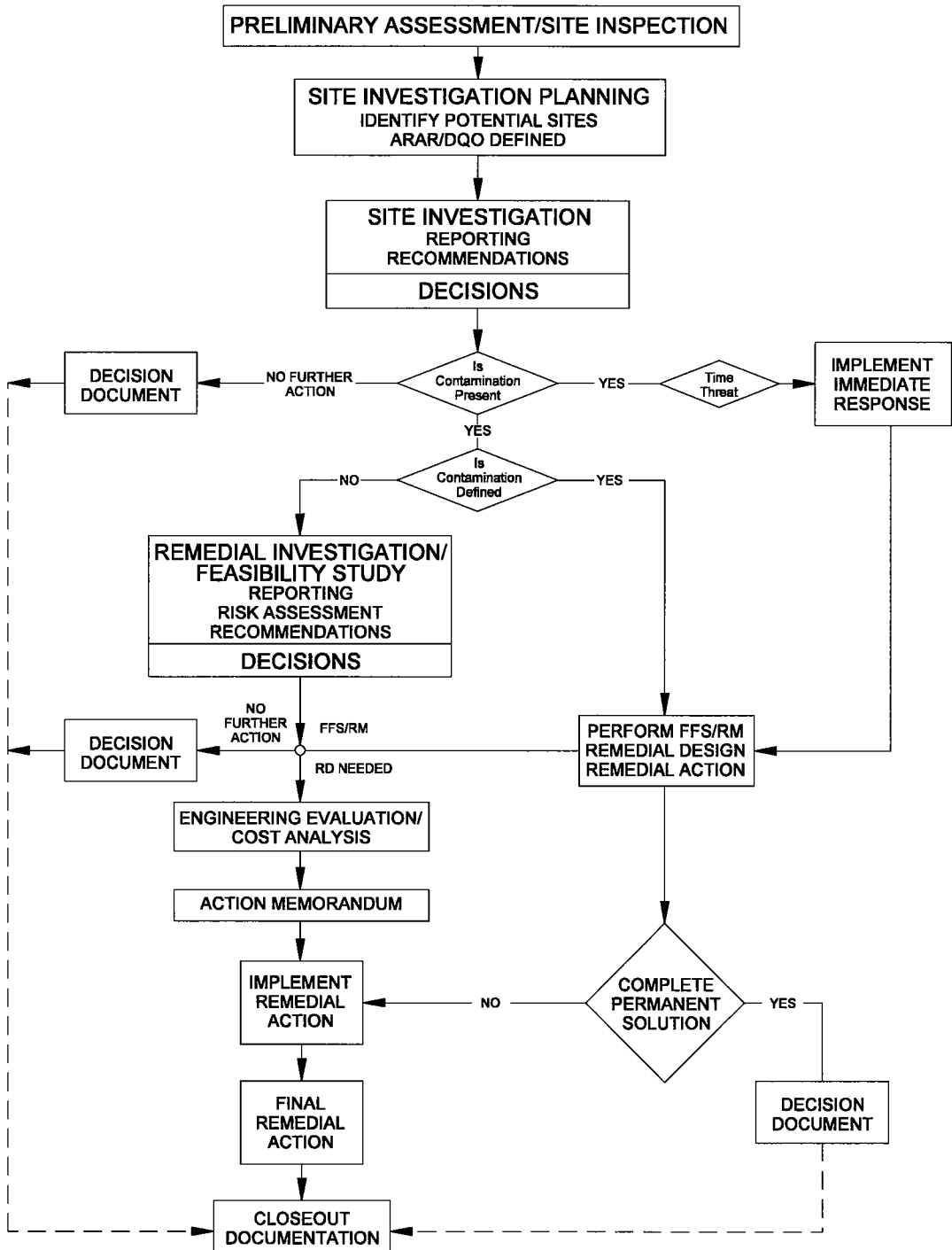
20 FTMC is a U. S. Army facility under the control of the U. S. Army Training and Doctrine  
21 Command (TRADOC) that was closed under the Base Realignment and Closure (BRAC)  
22 program in September 1999. Located in northeast Alabama, near the city of Anniston in  
23 Calhoun County (Figure 1-2), FTMC consisted of three portions of land: Main Post,  
24 Choccolocco Corridor, and Pelham Range. The majority of development at FTMC is in the  
25 northwest area of the Main Post. The City of Anniston is located to the south and west of the  
26 Main Post; adjoining the Main Post installation to the east are the Choccolocco Mountains of the  
27 Talladega National Forest.

28

29 The Main Post, consisting of 18,929 acres, was purchased by the federal government in  
30 March 1917 for the construction of a National Guard camp (Camp McClellan). Pistol and rifle  
31 ranges were established north of the camp, automatic rifle and machine gun ranges were  
32 established southwest of the camp, and artillery firing ranges were established southeast of the  
33 camp toward the Choccolocco Mountains (New South Associates, Inc. [NSA], 1993). Camp  
34 McClellan expanded throughout the 1920s and 1930s. The advent of World War II in the 1940s  
35 brought continued growth for the installation. Most notably, the 22,245 acres of Pelham Range  
36 were purchased to the west of the Main Post in early 1940 for artillery, tank, and heavy mortar  
37 firing. Approximately 4,488 additional acres to the east of the Main Post (Choccolocco

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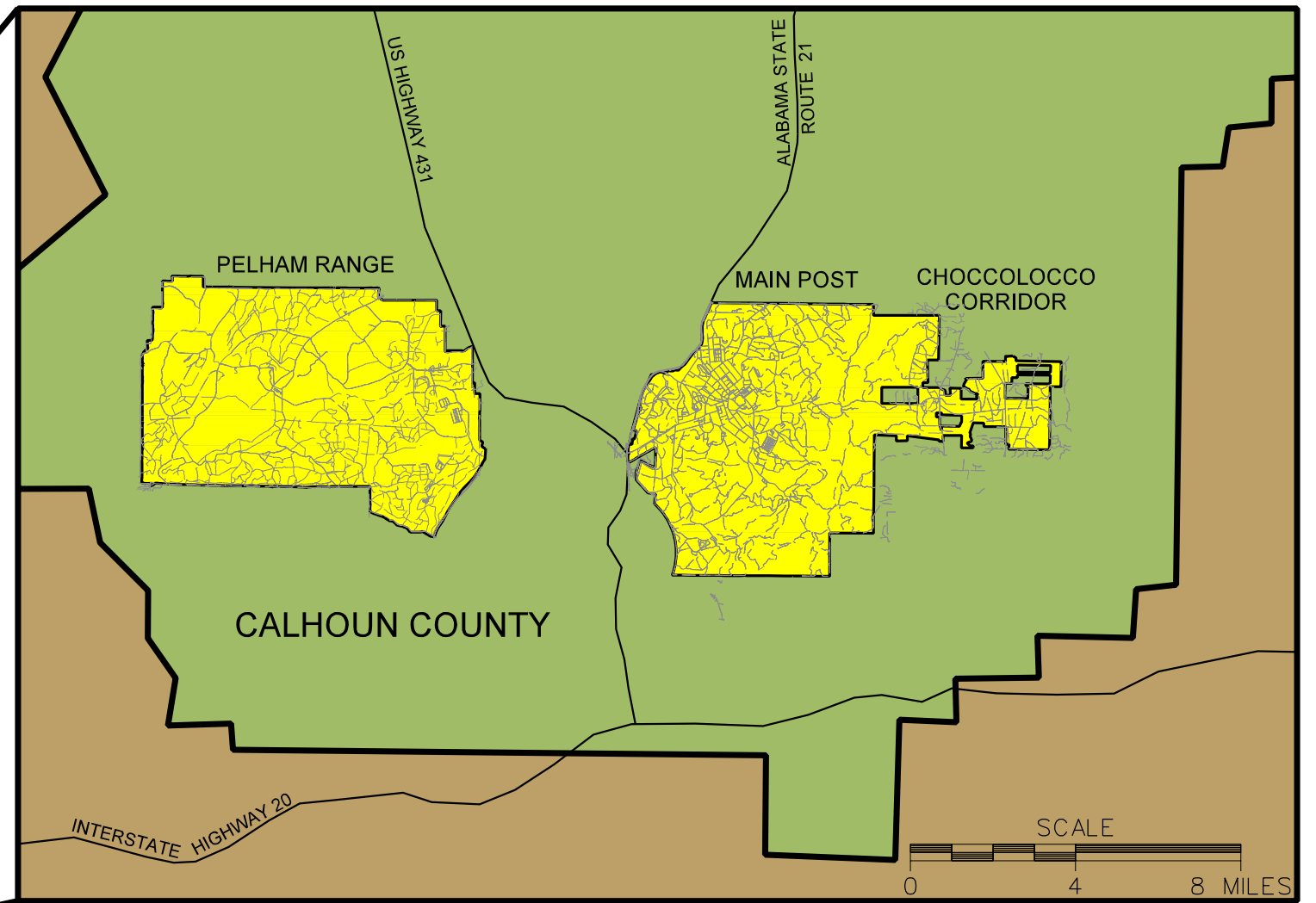
**FIGURE 1-1**  
**INSTALLATION RESTORATION**  
**PROGRAM FLOW CHART**  
**SMALL WEAPONS REPAIR SHOP**  
**PARCEL 66(7)**

- LEGEND:**
- ARAR APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS
  - DQO DATA QUALITY OBJECTIVES
  - FFS/RM FOCUSED FEASIBILITY STUDY/ REMEDIAL MEASURE
  - RD REMEDIAL DESIGN
  - RI/FS REMEDIAL INVESTIGATION/ FEASIBILITY STUDY

U. S. ARMY CORPS OF ENGINEERS  
 MOBILE DISTRICT  
 FORT McCLELLAN  
 CALHOUN COUNTY, ALABAMA  
 Contract No. DACA21-96-D-0018



DWG. NO.: \796887es.428  
 PROJ. NO.: 796887  
 INITIATOR: J. REMO  
 PROJ. MGR.: J. YACOB  
 DRAFT. CHCK. BY:  
 ENGR. CHCK. BY: S. MORAN  
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**FIGURE 1-2**  
**REGIONAL LOCATION MAP**  
**FORT McCLELLAN**  
**CALHOUN COUNTY, ALABAMA**

U. S. ARMY CORPS OF ENGINEERS  
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1 Corridor) were leased from the State of Alabama to connect the Main Post to the Talladega  
2 National Forest (CH2M Hill, 1994). Choccolocco Corridor was used for various range training  
3 activities. The lease was terminated in May 1998.

4  
5 The post-war period initially brought a decline in operations at FTMC. A decrease in military  
6 spending placed the installation on inactive status. However, in 1950 the installation was reinstated  
7 to active status because of the Korean Conflict. The U.S. Army Chemical School was established  
8 at FTMC in 1951; the large outdoor training areas allowed for specialized chemical training  
9 involving chemical warfare protection, decontamination procedures, flame throwers, and the  
10 operation of smoke generators. The Base hospital was renovated to specialize in chest diseases.  
11 The first permanent Women's Army Corps (WAC) training facility was established in 1955,  
12 although two previous WAC detachments had been established at the installation during the 1940s.  
13 Radiological training was conducted in the mid-1950s at Iron Mountain, Alpha Field, and Bromine  
14 Field, all located on the Main Post, as well as at Rideout Field on Pelham Range (NSA, 1993).

15  
16 The mission of FTMC was changed in 1966, and it became the U.S. Army School/Training  
17 Center. An Advanced Individual Training Infantry Brigade was activated in 1966 to meet  
18 requirements for the Vietnam War. The brigade was deactivated in 1970 due to continued force  
19 reduction in Vietnam.

20  
21 In 1973, the Chemical Corps School closed, along with the U.S. Army Combat Developments  
22 Command Chemical/Biological/Radiological Agency. Five years later, in 1978, the WAC was  
23 disbanded and the WAC school closed.

24  
25 In 1979, the Military Police School was moved to FTMC. In the same year, the U.S. Army  
26 Chemical Corps school was re-established, along with a Brigade for Basic Training. U.S. Army  
27 Forces Command units, such as D Company, 46th Engineers, were also garrisoned at the post  
28 during the 1970s and 1980s.

29  
30 The mid-1980s brought additional operations to Pelham Range, which is located approximately two  
31 miles northwest of Anniston. This area was used for maneuver training and a wide range of  
32 activities from small-arms training to tank and artillery training. Pelham Range has also been used  
33 for chemical decontamination training and radiological training.

1 The main missions and support organizations at FTMC have been:

2

- 3 • U.S. Army Chemical School
- 4 • U.S. Army Military Police School
- 5 • Training Center Command
- 6 • Training Brigade
- 7 • Directorate of Contracting
- 8 • Directorate of Community Activities
- 9 • Directorate of Resource Management
- 10 • Provost Marshal Office Directorate of Community Safety
- 11 • Office of the Staff Judge Advocate
- 12 • Safety Office
- 13 • Equal Employment Opportunity Office
- 14 • Office of the Inspector General
- 15 • Internal Review and Audit Compliance
- 16 • Public Affairs Office
- 17 • Directorate of Engineering and Housing
- 18 • Directorate of Environment
- 19 • Directorate of Information Management
- 20 • Directorate of Logistics
- 21 • Directorate of Plans, Training, Mobilization, and Security
- 22 • Reserve Component Support
- 23 • Women's Army Corps.

24

25 Past tenant activities included the following:

26

- 27 • U.S. Army Medical Department Activity
- 28 • U.S. Army Dental Activity
- 29 • U.S. Department of Defense Polygraph Institute
- 30 • Defense Finance and Accounting Services
- 31 • Defense Investigative Service
- 32 • Marine Corps Administrative Detachment
- 33 • Criminal Investigation Division
- 34 • 902nd Military Intelligence Group
- 35 • Army National Guard
- 36 • U.S. Army Reserves
- 37 • TRADOC Manpower Activity
- 38 • 722nd Explosive Ordnance Detachment
- 39 • Army Air Force Exchange Service
- 40 • Defense Commissary Agency
- 41 • Defense Reutilization and Marketing Office
- 42 • U.S. Department of Defense Security Operation Testing Support
- 43 • Fort McClellan Elementary School
- 44 • Naval Construction Training Center Detachment

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

3  
4 FTMC operations were deactivated and missions completed with the installation closure on  
5 September 30, 1999.

### 6 7 **1.2.2 Parcel 66(7) Site Description and History**

8 Parcel 66(7) is located in the central portion of the Main Post at the intersection of Waverly Road  
9 and Freemont Road (Figure 1-3). Two buildings (Buildings 335 and 336) are located within the  
10 Parcel 66(7) boundary. Building 335 formerly housed the Small Weapons Repair Shop, where  
11 weapons, such as the M-16 rifle, were stored after training exercises. The Small Weapons Repair  
12 Shop occupied only a small room on the west side of Building 335. It is reported that the main  
13 part of Building 335, with a high ceiling and suspended cable hoists, was used primarily for tank  
14 repair. Virtually all of Parcel 66(7) and the area immediately surrounding the parcel are covered  
15 with asphalt or concrete pavement; only a narrow strip along the northern and western boundary  
16 is covered with grass. A 6-foot-high chain-link fence surrounds the entire study area and  
17 adjacent parking area. Man-made drainage ditches border the site along Waverly Road to the  
18 north and Freemont Road to the west.

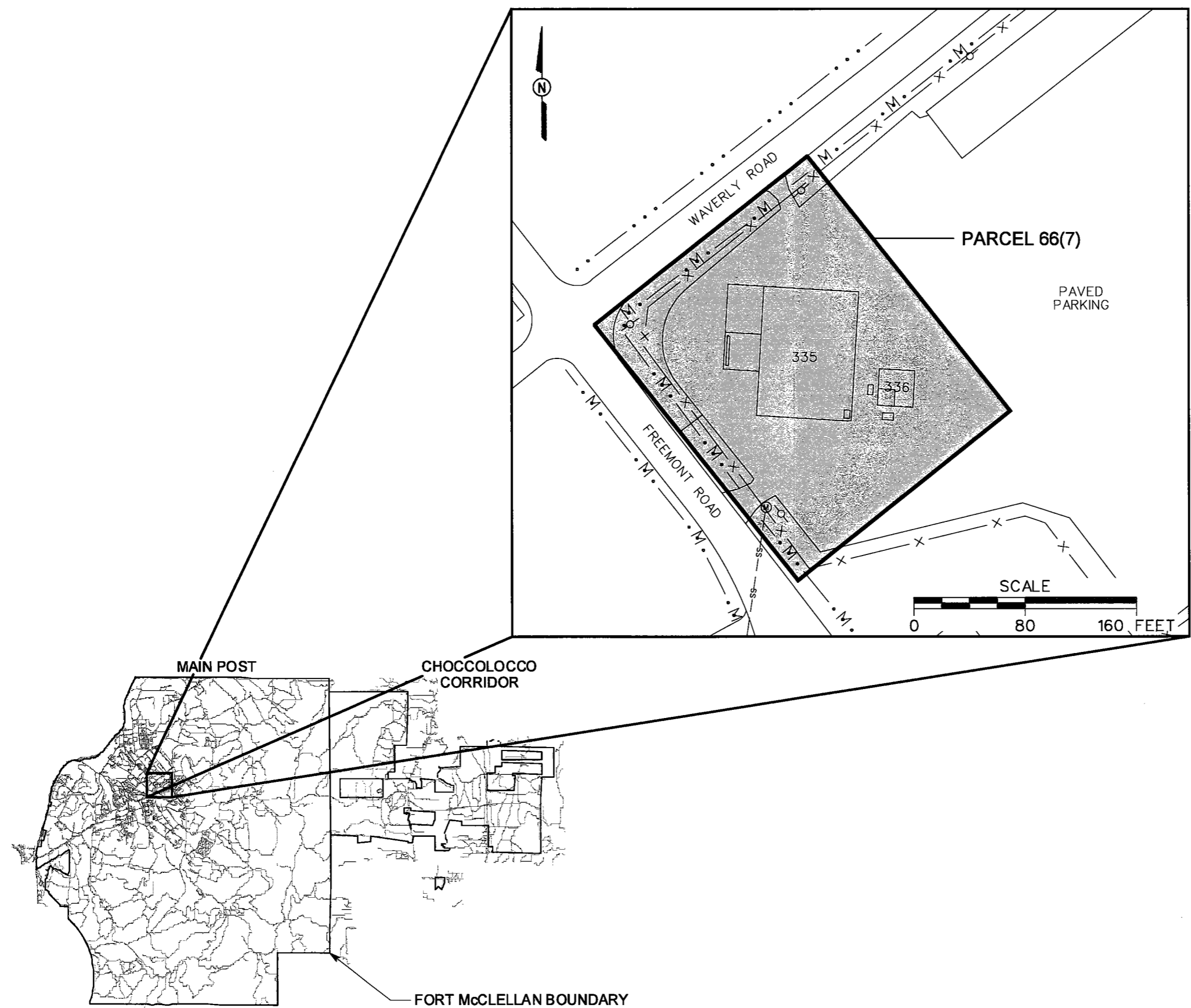
19  
20 In the Small Weapons Repair Shop, weapons were disassembled and cleaned using various  
21 solutions and solvents, and then stored until the next exercise. The shop was built in 1941; it is  
22 not known when operations began at this location. The operation was moved to the Consolidated  
23 Maintenance Facility (Building 350) in approximately 1991. Building 335 was maintained by  
24 the Alabama National Guard for boiler plant storage, but it is currently empty (Environmental  
25 Science and Engineering, Inc. [ESE], 1998). Historically, weapons were brought to the repair  
26 shop at Building 335, degreased with 1,1,1-trichloroethane (TCA) in a vapor degreaser, and then  
27 stripped with a caustic solution, using small vats approximately 14 inches wide by 36 inches long  
28 by 20 inches deep. Bluing/parkerizing operations were also conducted at the shop. It appears  
29 that only one vat was used for each solution.

30  
31 Fluids used during the weapons cleaning process are as follows (ESE, 1998):

- 32 • Rinse Tank, Acid Cycle – Contained water for rinsing weapons after treatment in  
33 the phosphate-coating compound (parkerizing) tank and discharged to sanitary  
34 sewer.  
35  
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**LEGEND**

	UNIMPROVED ROADS AND PARKING
	PAVED ROADS AND PARKING
	BUILDING
	PARCEL BOUNDARY
	SURFACE DRAINAGE / CREEK
	MANMADE SURFACE DRAINAGE FEATURE
	FENCE
	UTILITY POLE
	SANITARY SEWER LINE
	MANHOLE

**FIGURE 1-3**  
**SITE LOCATION MAP**  
**SMALL WEAPONS REPAIR SHOP**  
**PARCEL 66(7)**

U. S. ARMY CORPS OF ENGINEERS  
 MOBILE DISTRICT  
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 CALHOUN COUNTY, ALABAMA  
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- 1           • Preservative Oil Tank, Acid Cycle – Contained cutting fluid used to treat weapons  
2           after treatment with sodium dichromate. The waste oil was turned over to the  
3           Defense Reutilization and Marketing Office (DRMO).
- 4
- 5           • Rinse Tank, Plating Cycle – Contained water used to rinse weapons after treatment  
6           in black oxide (bluing) and discharged to the sanitary sewer.
- 7
- 8           • Preservative Oil, Plating Cycle – Contained cutting fluids used to treat weapons  
9           after rinse in the water tank. The waste oil was turned over to the DRMO.
- 10

11 A second description of weapons refinishing activities states that trichloroethene (TCE) was used  
12 in the initial step as a degreasing agent for small weapons parts (FTMC, 1985). A 110-gallon vat  
13 of heated TCE was used for a 10 to 15 minute period to degrease the parts. The vat was drained  
14 infrequently (as seldom as once every 3 years). Typically the vat contents would be pumped into  
15 drums for disposal. The vat contained a 1½-inch steel discharge line located at the bottom of the  
16 vat and controlled by a gate valve. The potential existed for the contents of the vat to discharge  
17 directly to the ground surface outside of the building. In addition, the third step in the refinishing  
18 process, the rinsing cycle, involved the continuous overflow of water from a 400-gallon vat  
19 directly into the sanitary sewer line (FTMC, 1985).

20

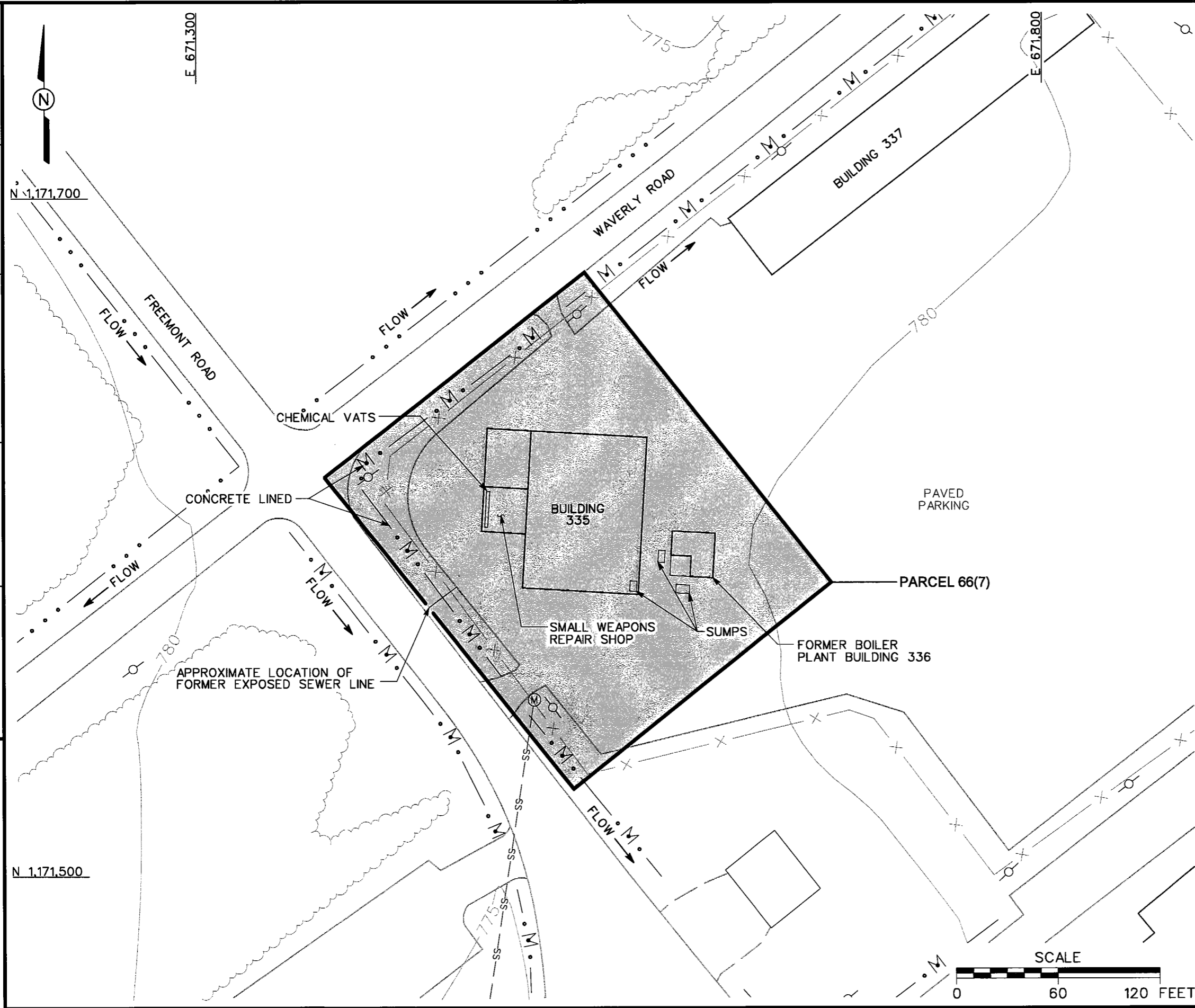
21 Two older cleaning units (a bead blaster and a shot blaster) were reported to remain in Building  
22 335. Reportedly, neither of these units was used after 1987 (Roy F. Weston, Inc. [Weston],  
23 1990). These blaster units did not remain in the building and were not found in the area  
24 surrounding Building 335. The waste material from the blasters was not found, and no historical  
25 information was available concerning the storage location for the blast waste material (ESE,  
26 1998).

27

28 In December 1985, approximately 30 gallons of cutting fluid were released from this building  
29 when a drain valve was left open and fluid flowed into a pipe that led to the sanitary sewer  
30 system. The sewer pipe had been recently broken or disconnected at a point where it crossed a  
31 newly constructed concrete ditch. The suspected location of the exposed sanitary sewer pipe that  
32 crossed the cement-lined ditch is shown on Figure 1-4. This ditch drained into nearby Cane  
33 Creek near Berman Road. The cutting fluid emulsified with the water in the creek and changed  
34 the color of the water to milky white for approximately 400 yards downstream of the discharge  
35 (ESE,1998).

36

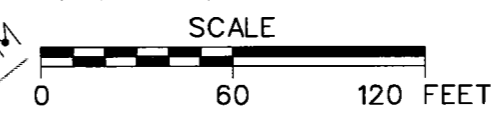
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- LEGEND**
- UNIMPROVED ROADS AND PARKING
  - PAVED ROADS AND PARKING
  - BUILDING
  - TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
  - TREES / TREELINE
  - PARCEL BOUNDARY
  - CULVERT WITH HEADWALL
  - SURFACE DRAINAGE / CREEK
  - MANMADE SURFACE DRAINAGE FEATURE
  - FLOW SURFACE WATER FLOW DIRECTION
  - FENCE
  - UTILITY POLE
  - SANITARY SEWER LINE
  - MANHOLE

**FIGURE 1-4**  
**SITE MAP**  
**SMALL WEAPONS REPAIR SHOP**  
**PARCEL 66(7)**

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1 A few days after the release, there was no evidence of emulsified oils, except for a slight sheen  
2 on the water. The constituents of the cutting fluid are not listed as hazardous waste under the  
3 Resource Conservation and Recovery Act. The results from the analyses indicated that this fluid  
4 did not exhibit any characteristics based on corrosivity or the extraction procedure toxicity that  
5 would qualify it as a hazardous waste. This spill was therefore classified as an oil spill (ESE,  
6 1998).

7  
8 The FTMC Fire Department responded to the cutting fluid spill. The Directorate of Engineering  
9 and Housing, U.S. Environmental Protection Agency (EPA), TRADOC, and Alabama  
10 Department of Environmental Management (ADEM) were notified of this spill. TRADOC and  
11 EPA were satisfied that FTMC had implemented appropriate spill response procedures. ADEM  
12 responded a week later with approval. The line was later repaired and now runs across the ditch.  
13 Additional documentation on this spill was not identified (ESE, 1998).

14  
15 Weston reported the potential for discharge of phosphoric acid, chromic acid, preservative oils,  
16 alkaline solutions, black oxides, and rinse waters to a storm sewer drain (Weston, 1990). Upon  
17 inspection of sanitary and storm sewer maps, it was determined that only a single sanitary sewer  
18 line runs to Building 335 (ESE, 1998).

19  
20 During the environmental baseline survey (EBS) conducted in 1998, one full unlabeled drum  
21 dated 1991 and two gym lockers filled with paint cans were discovered behind Building 335.  
22 Several other unlabeled drums were observed inside the main building. The contents and  
23 volumes of these drums were not determined because they were placed behind stacks of  
24 mattresses and bed frames. Some of the paint cans were rusted and half-used, others were  
25 unlabeled, and others had leaked (ESE, 1998). These items were not present inside or behind  
26 Building 335 during a site visit performed by IT in December 1998.

27  
28 Building 336, an inactive boiler plant, is located just east of Building 335 (Figure 1-4). There is  
29 not any other information available concerning dates of operation or past activities at Building  
30 336 (ESE, 1998).

### 31 32 **1.2.3 Previous Investigations**

33 ESE conducted an EBS to document current environmental conditions of all FTMC property  
34 (ESE, 1998). The study identified sites that, based on available information, have no history of  
35 contamination and comply with DOD guidance on fast-track cleanup at closing installations.

1 The EBS also provided a baseline picture of FTMC properties by identifying and categorizing  
2 the properties by seven criteria.

- 3
- 4 1. Areas where no storage, release, or disposal of hazardous substances or petroleum  
5 products has occurred (including no migration of these substances from adjacent  
6 areas)
- 7
- 8 2. Areas where only release or disposal of petroleum products has occurred
- 9
- 10 3. Areas where release, disposal, and/or migration of hazardous substances has  
11 occurred, but at concentrations that do not require a removal or remedial response
- 12
- 13 4. Areas where release, disposal, and/or migration of hazardous substances has  
14 occurred, and all removal or remedial actions to protect human health and the  
15 environment have been taken
- 16
- 17 5. Areas where release, disposal, and/or migration of hazardous substances has  
18 occurred, and removal or remedial actions are underway, but all required remedial  
19 actions have not yet been taken
- 20
- 21 6. Areas where release, disposal, and/or migration of hazardous substances has  
22 occurred, but required actions have not yet been implemented
- 23
- 24 7. Areas that are not evaluated or require additional evaluation.
- 25

26 The EBS was conducted in accordance with protocols of the Community Environmental  
27 Response Facilitation Act (CERFA) (Public Law 102-426) and DOD policy regarding conta-  
28 mination assessment. Record searches and reviews were performed on all reasonably available  
29 documents from FTMC, ADEM, EPA Region IV, and Calhoun County, as well as a database  
30 search of Comprehensive Environmental Response, Compensation, and Liability Act-regulated  
31 substances, petroleum products, and Resource Conservation and Recovery Act-regulated facili-  
32 ties. Available historical maps and aerial photographs were reviewed to document historical land  
33 uses. Personal and telephone interviews of past and present FTMC employees and military  
34 personnel were conducted. In addition, visual site inspections were conducted to verify condi-  
35 tions of specific property parcels.

36

37 Other environmental sampling activities have not been conducted at this site. The Small  
38 Weapons Repair Shop, Parcel 66(7), was identified as a Category 7 CERFA site in the EBS.  
39 Category 7 CERFA parcels are areas that have not been evaluated and/or that require additional  
40 evaluation to determine their environmental condition.

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### 1.3 Report Organization

This RI report is organized as follows:

- **Chapter 1.0 – Introduction.** This chapter provides site description and history information for FTMC and Parcel 66(7) and summarizes previous investigations at Parcel 66(7).
- **Chapter 2.0 – Study Area Investigation.** This chapter summarizes the SI and supplemental RI field activities conducted by IT at Parcel 66(7), including environmental sampling and analysis, monitoring well installation, and slug testing.
- **Chapter 3.0 – Physical Characteristics of Study Area.** This chapter describes the physical characteristics of Parcel 66(7), including demography and land reuse, meteorology, physiography, sensitive environments, soils, geology, and hydrogeology.
- **Chapter 4.0 – Nature and Extent of Contamination.** This chapter summarizes the analytical results and compares data with human health site-specific screening levels (SSSL), ecological screening values (ESV), and background screening values to determine the nature and extent of contamination and probable sources.
- **Chapter 5.0 – Contaminant Fate and Transport.** This chapter evaluates the chemical and physical properties of the site-related chemicals identified in Chapter 4.0. It also describes potential routes of migration, contaminant persistence, and contaminant migration.
- **Chapter 6.0 – Streamlined Human Health Risk Assessment.** This chapter presents the results of the streamlined human health risk assessment, including the conceptual site exposure model, chemicals of potential concern, risk characterization, chemicals of concern, and remedial goal options.
- **Chapter 7.0 – Screening-Level Ecological Risk Assessment.** This chapter presents the results of the screening-level ecological risk assessment, including the environmental setting, potential contaminants, site conceptual model, screening-level risk estimation, constituents of potential ecological concern, and uncertainty analysis.
- **Chapter 8.0 – Summary, Conclusions, and Recommendations.** This chapter summarizes the major conclusions of the RI report and provides recommendations for further investigation.
- **Chapter 9.0 – References.** This chapter lists the references cited in this RI report.