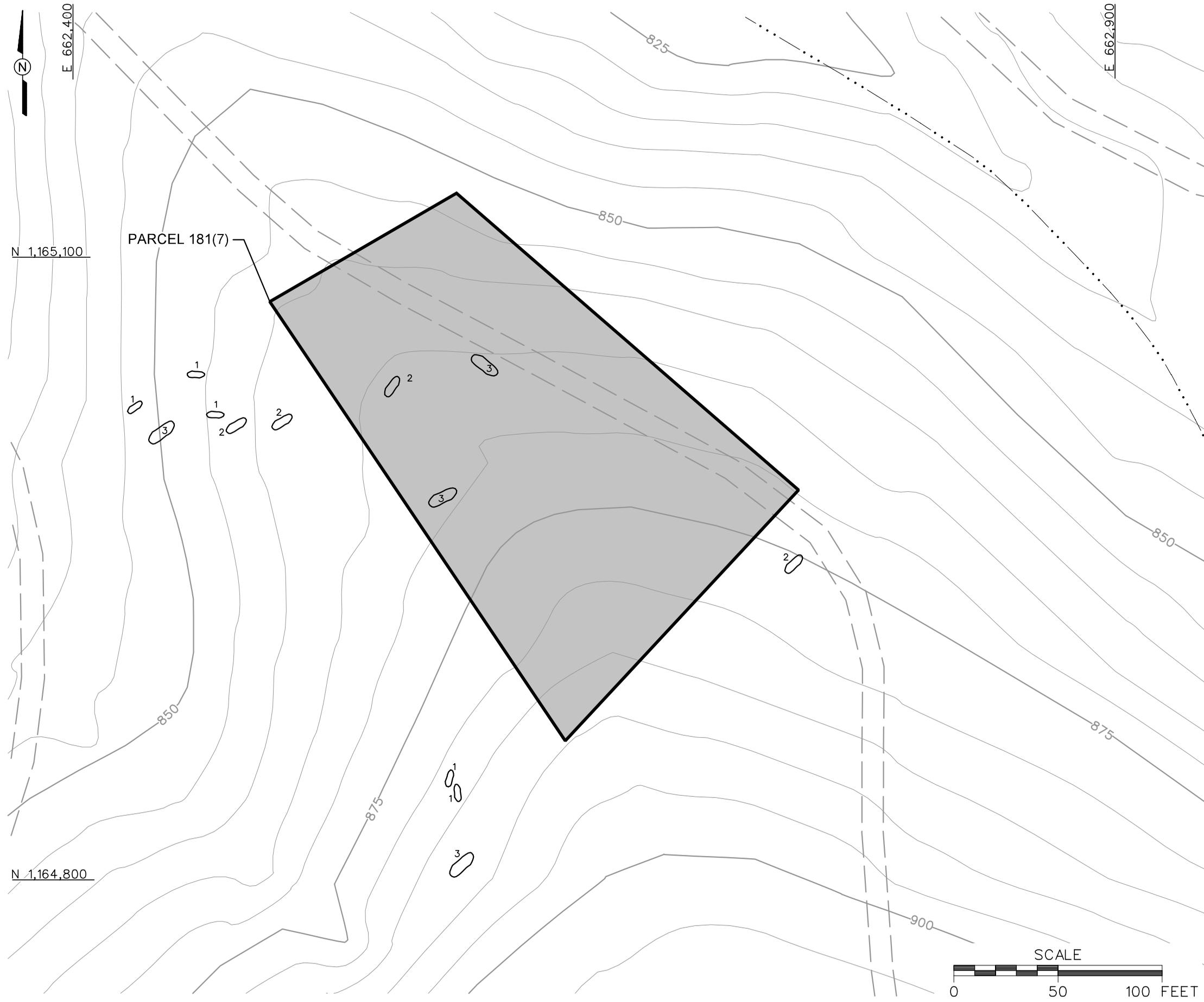


DWG. NO.: ...796887es.081
 PROJ. NO.: 796887
 INITIATOR: J. RAGSDALE
 PROJ. MGR.: J. YACOUB
 DRAFT. CHCK. BY:
 ENGR. CHCK. BY: J. RAGSDALE
 STARTING DATE: 05/22/00
 DATE LAST REV.:
 DRAWN BY: D. BILLINGSLEY
 08/30/00
 09:14:12
 DBILLING
 c:\cadd\design\796887es.081

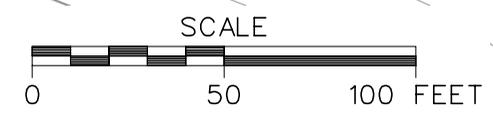


LEGEND

	UNIMPROVED ROADS AND PARKING
	PAVED ROADS AND PARKING
	TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
	PARCEL BOUNDARY
	SURFACE DRAINAGE / CREEK
OBSERVATION BY IT CORP, JULY 2000 PIT/DEPRESSION SIZE:	
	2-5' DIAMETER x ≤ 2' DEEP
	5-10' DIAMETER x 3-5' DEEP
	≥ 10' DIAMETER x ≥ 5' DEEP

FIGURE 1-5
SITE MAP
TRAINING AREA T-4
PARCEL 181(7)

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



authorized for surface use only by USATHAMA and the FTMC U.S. Army Chemical School (ESE, 1998).

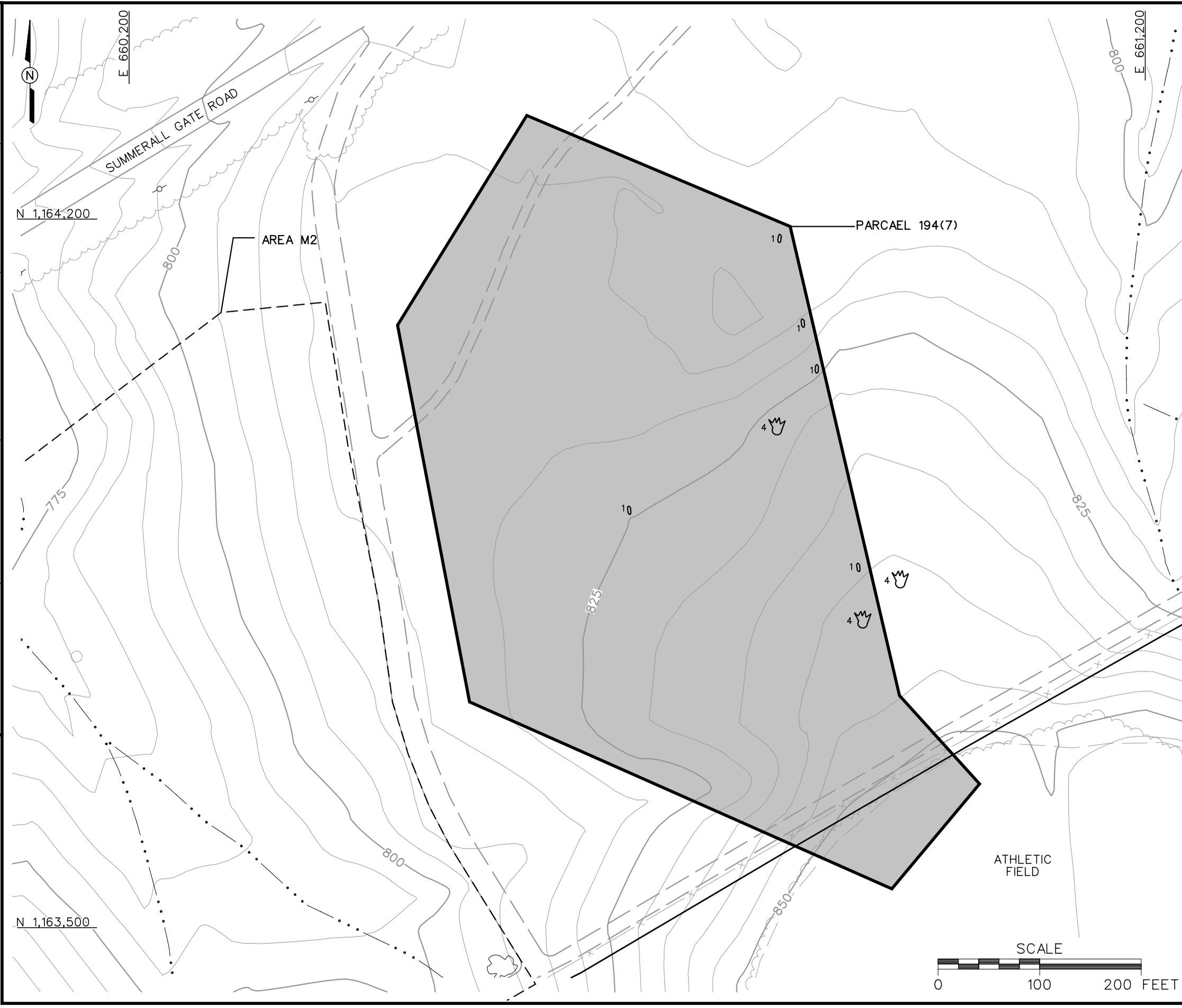
Site investigations conducted during the remedial investigation (RI) included field screening for the chemical warfare materials (CWM) HD and nerve agent (VX) and their breakdown products, soil sampling, and magnetometer surveying over a site identified in historical records and site photography (SAIC, 1995). Surface evidence of the former training area was not observed during the RI. Four shallow soil samples were collected and screened in the field for the presence of HD and VX, and then sent to the laboratory for determination of the presence of HD and VX breakdown products. HD, VX, and their breakdown products were not detected in these four samples or in surface soil samples collected from this area in 1973 (SAIC, 1993). Samples were not analyzed for biological simulants. The geophysical survey indicated metallic debris scattered within and beyond the site boundaries and burial of some items is suggested by the geophysical data (SAIC, 1995).

Several large pits/depressions were observed during a site walk by IT personnel in July 2000 (Figure 1-5). Pits/depressions, some over 10 feet in diameter and greater than 5 feet deep, were observed around the northwest and southwest corners of the parcel.

Former Weapons Demonstration Area, Parcel 194(7). The Former Weapons Demonstration Area is located southeast of Summerall Gate Road on the western portion of the Main Post within Area 45 (Figure 1-6). The Former Weapons Demonstration Area, Parcel 194(7), was reportedly located at the top of the hill at the first road east of the post gate (ESE, 1998). This area is shown on the 1954 and 1961 aerial photographs and is referenced on the 1956 map of Chemical Corps Training Areas (USACE, 1999a). The site was reportedly used in the 1950s for familiarization training with various munitions. Munitions demonstrated include white phosphorus grenades, flame-throwers, white phosphorus, and field flame expedient (FFE) (ESE, 1998). This area appears cleared and the site of intense activity on aerial photographs taken in 1957. The site currently has unrestricted access.

According to the Archives Search Report (ASR), the Former Chemical (Weapons) Demonstration Area in 1954 was located about a mile and a half west of the Chemical School on Summerall Road, near the Summerall Gate Road entrance to FTMC (then called South Gate Road) (USACE, 1999a). The area included a toxic gas yard, a radiological survey area, and a biological warfare (BW) survey area. An interview with a retired chemical school instructor also

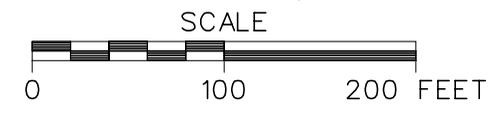
DWG. NO.: ... 796887.es.082
 PROJ. NO.: 796887
 INITIATOR: J. RAGSDALE
 PROJ. MGR.: J. YACOB
 DRAFT. CHCK. BY:
 ENGR. CHCK. BY: J. RAGSDALE
 STARTING DATE: 05/22/00
 DATE LAST REV.:
 DRAWN BY: D. BILLINGSLEY
 08/30/00
 11:28:04
 DBILLING
 c:\cadd\design\796887.es.082



- LEGEND**
-  UNIMPROVED ROADS AND PARKING
 -  PAVED ROADS AND PARKING
 -  BUILDING
 -  TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
 -  TREES / TREELINE
 -  PARCEL BOUNDARY
 -  SURFACE DRAINAGE / CREEK
 -  UTILITY POLE
- OBSERVATION BY IT CORP, JULY 2000
PIT/DEPRESSION SIZE:
-  1 2-5' DIAMETER x ≤ 2' DEEP
 -  4 SMOKE GRENADES/FLARE PIECES

FIGURE 1-6
SITE MAP
 FORMER WEAPONS DEMONSTRATION
 AREA
 PARCEL 194(7)

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



makes reference to this area (USACE, 1999a). The interviewee stated that the "Weapons Demonstration Area" could be found by taking the first right after entering Summerall Gate and going to the top of the hill (ESE, 1998).

During the interviewee's tenure, toxic chemical agents were not used at this location (USACE, 1999a). A second interviewee, who had conducted training at the site, stated that area was in use when he came to FTMC in 1961 and was used through 1963. He also stated that the area was never used for live agent training during his tenure (USACE, 1999a). Both interviewees stated that the area was used for simulated detection of biological agent, however agent was not employed, the trainees simply went through the motions (USACE, 1999a).

Munitions demonstrated in this area included the following (USACE, 1999a):

- Mechanical flame thrower
- Portable flame thrower
- Various smoke grenades
- Rifle smoke grenades
- Thermite grenades
- X-200 land mines (napalm-filled 5-gallon can)
- M5 and M4A2 (Navy floating) smoke pots
- M2 and M3 smoke generators
- Primacord
- M1 land mine filled with MR (innocuous simulant for HD)
- White phosphorus
- FFE.

By 1955, the Chemical Demonstration Area (Former Weapons Demonstration Area) was deemed inadequate with regard to proper safety distances for parts of the chemical munitions demonstrations (USACE, 1999a). Officials cited several reasons for their concern over the demonstration area including:

- In the demonstration of chemical rifle grenades, it was found that grenades had landed occasionally on the shoulders of South Gate Road (Summerall Gate Road), even though fired at the appropriate angle and as far back from the road as possible.
- During the demonstration of the 55-gallon drum of napalm, fragments of the drum had landed on the edge of South Gate Road.

In addition, the safety distance for the chemical manifold, and the wind conditions in the area for the mechanized flame thrower proved to be inadequate. A recommendation for a new demonstration area included Washington Rocket Launcher Range No. 16 and Washington Rifle Grenade Range No. 17.

During May 1998, personnel from the USACE-St. Louis Engineer District inspected many areas suspected of being used for chemical warfare training or CWM storage. The area south of Summerall Gate Road and east of the entrance gate was walked. The nose of a concrete bomb was found sticking out of the ground in a small open area. The concrete bomb nose was sticking straight up and may have been used as some sort of marker. A small metal can was found about 20 feet from the concrete bomb. The can resembled the type used to ship fuses and boosters for various types of ordnance. There were not any other indications found of surface contamination or burial sites (USACE, 1999a). Also, there is not any documented evidence of toxic agents being used in this area (USACE, 1999a).

Several small pits/depressions and some spent smoke grenade/flare pieces were observed during a site walk by IT personnel in July 2000 (Figure 1-6). Pits/depressions measuring 2 to 5 feet in diameter and less than 2 feet deep were observed along the eastern side of the parcel. In two locations, spent smoke grenade and flare pieces were observed in the area as well. A high concentration of relatively small depressions indicating potential impact areas were observed approximately 500 to 800 feet east of Parcel 194(7) (Figure 1-3).

South Gate Toxic Yard, Parcel 518(7). This area, reported within Area 45, is referenced only by text on the 1956 map of Chemical Corps Training Areas (USACE, 1999a). The area is cited as being 1.5 miles west of the school. The exact location of the South Gate Toxic Yard and the items stored at the yard are unknown. However, this area was probably near or within the Former Weapons Demonstration Area (USACE, 1999a).

Range 17, Explosives Proficiency Training Area, Parcel 73Q-X. Range 17, Explosives Proficiency Training Area, Parcel 73Q-X, is located in the southwestern portion of the Main Post, south of Summerall Gate Road near the intersection with Iron Mountain Road (Figure 1-7). The range was used from 1977 through mid-1994. Range 17 was most recently used as a communications training area. Records from 1983 indicate that Range 17 was used as an explosives and ordnance disposal training range and impact area at that time. FTMC training

maps indicate that a Dud Impact Area (Parcel 91Q-X) is located a short distance south of Range 17. Additional information regarding this range, dates of use, or operation is not available.

IT personnel were unable to conduct a site walk in this area due to ongoing UXO remediation by EOD Technology, Inc., within the eastern bypass right-of-way.

Former Machine Gun Transition Range, Parcel 228Q. Former Machine Gun Transition Range, Parcel 228Q, is located northeast of Range 17, Explosives Proficiency Training Area, Parcel 73Q-X, and extends to the southeast (Figure 1-8). The 1946 Reservation Map (U.S. Engineer Office, 1946) identifies a range designated “M.G.T.” at Range 17. It is believed that this is a “machine gun transition” range (ESE, 1998). The range is part of Combat Range No. 2. The direction of fire at this range was to the southeast toward the north slope of Baltzell Hills east of Iron Mountain Road. The 1946 Reservation Map is the only documentation of this range. There is not any other information that is available regarding this range, dates of use, or operation.

IT personnel were unable to conduct a site walk in this area due to ongoing UXO remediation by EOD Technology, Inc. within the eastern bypass right-of-way.

Former Rocket Launcher Range, Parcel 229Q-X. The Former Rocket Launcher Range, Parcel 229Q-X, extends to the southwest across Range 17, Explosives Proficiency Training Area, Parcel 73Q-X (Figure 1-9). The 1946 Reservation Map (U.S. Engineer Office, 1946) identifies a "Rocket Launcher Range" in the vicinity of Range 17 (ESE, 1998). Whereas the direction fire at Range 17 was to the south, the direction of fire at this range was to the southwest. The impact area is not identified and only a portion of the safe distance zone (SDZ) is identified on the 1946 map. The direction of fire was generally in the direction of a hill, presumably Iron Mountain. There is some discrepancy between the precise location of Iron Mountain, as plotted on current topographic maps, and the 1946 Reservation Map (ESE, 1998). The SDZ plotted on the EBS maps is estimated from the partial SDZ presented on the 1946 map and knowledge of maximum range for this ordnance (ESE, 1998). The 1946 Reservation Map is the only documentation of this range. Additional information regarding this range, dates of use, or operation is not available.

IT personnel were unable to conduct a site walk in this area due to ongoing UXO remediation by EOD Technology, Inc., within the eastern bypass right-of-way.

DWG. NO.: ...796887es.083
 PROJ. NO.: 796887
 INITIATOR: J. RAGSDALE
 PROJ. MGR.: J. YACOB
 DRAFT. CHK. BY:
 ENGR. CHK. BY: J. RAGSDALE
 STARTING DATE: 05/22/00
 DATE LAST REV.:
 DRAWN BY: D. BILLINGSLEY
 08/30/00
 10:03:29
 DBILLING
 c:\cadd\design\796887es.083



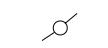
- LEGEND**
-  UNIMPROVED ROADS AND PARKING
 -  PAVED ROADS AND PARKING
 -  BUILDING
 -  TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
 -  TREES / TREELINE
 -  PARCEL BOUNDARY
 -  SURFACE DRAINAGE / CREEK
 -  UTILITY POLE
 -  PROBABLE FIRING LINE AREA

FIGURE 1-7
SITE MAP
 RANGE 17, EXPLOSIVES PROFICIENCY
 TRAINING AREA
 PARCEL 73Q-X

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



DWG. NO.: ...796887es.084
 PROJ. NO.: 796887
 INITIATOR: J. RAGSDALE
 PROJ. MGR.: J. YACOB
 DRAFT. CHK. BY:
 ENGR. CHK. BY: J. RAGSDALE
 STARTING DATE: 05/22/00
 DATE LAST REV.:
 DRAWN BY: D. BILLINGSLEY
 08/30/00
 10:08:24
 DBILLING
 c:\cadd\design\796887es.084



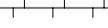
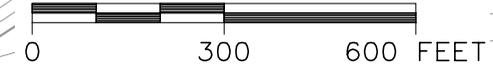
- LEGEND**
-  UNIMPROVED ROADS AND PARKING
 -  PAVED ROADS AND PARKING
 -  BUILDING
 -  TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
 -  TREES / TREELINE
 -  PARCEL BOUNDARY
 -  SURFACE DRAINAGE / CREEK
 -  UTILITY POLE
 -  BERM
 -  PROBABLE FIRING LINE AREA

FIGURE 1-8
SITE MAP
FORMER MACHINE GUN
TRANSITION RANGE
PARCEL 228Q

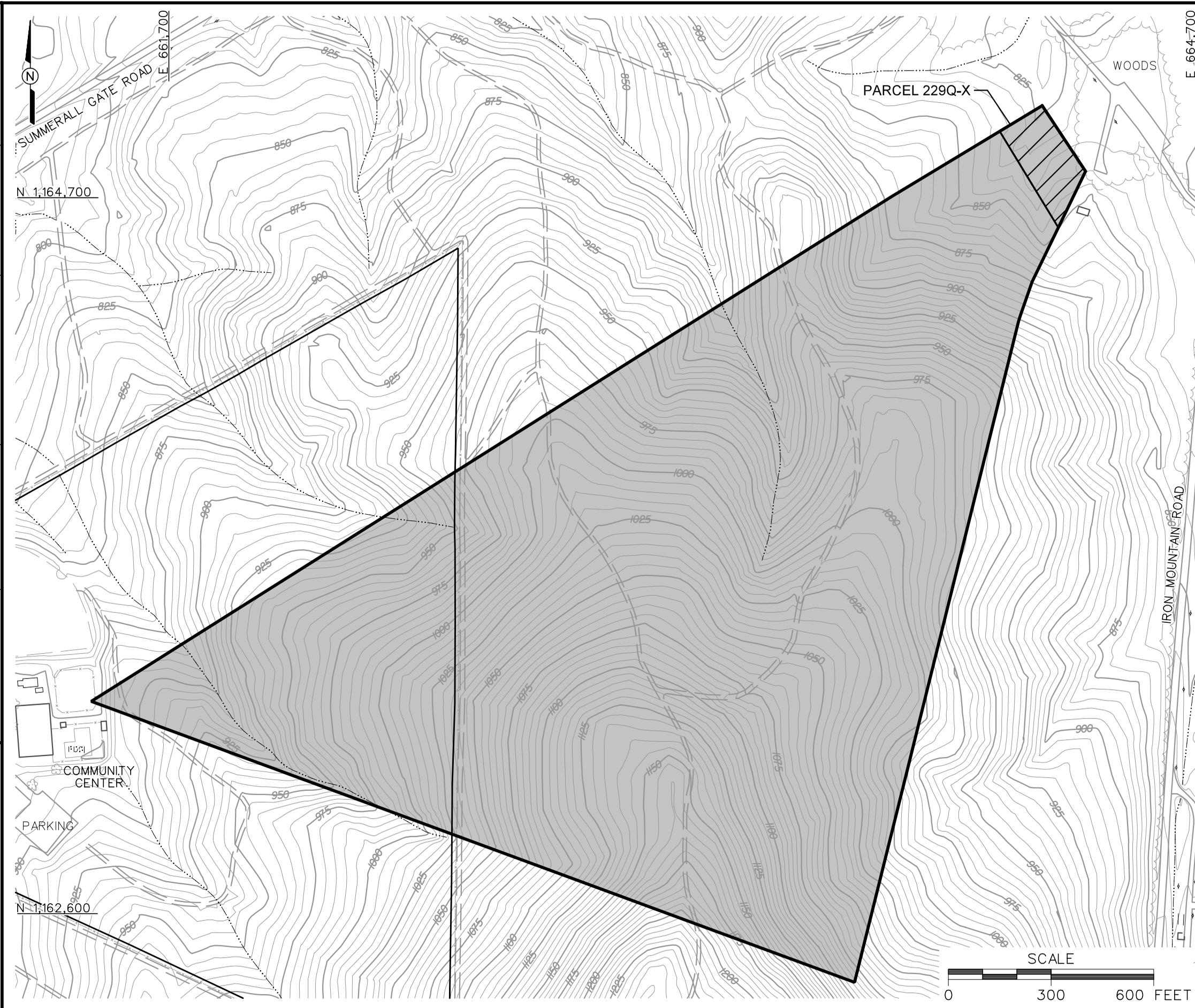
U. S. ARMY CORPS OF ENGINEERS
 MOBILE DISTRICT
 FORT McCLELLAN
 CALHOUN COUNTY, ALABAMA
 Contract No. DACA21-96-D-0018

SCALE



IT CORPORATION
A Member of The IT Group

DWG. NO.: ... 796887.es.085
 PROJ. NO.: 796887
 INITIATOR: J. RAGSDALE
 PROJ. MGR.: J. YACOB
 DRAFT. CHK. BY:
 ENGR. CHK. BY: J. RAGSDALE
 STARTING DATE: 05/22/00
 DATE LAST REV.:
 DRAWN BY: D. BILLINGSLEY
 08/30/00
 10:16:29
 DBILLING
 c:\cadd\design\796887.es.085



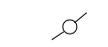
- LEGEND**
-  UNIMPROVED ROADS AND PARKING
 -  PAVED ROADS AND PARKING
 -  BUILDING
 -  TOPOGRAPHIC CONTOURS (CONTOUR INTERVAL - 5 FOOT)
 -  TREES / TREELINE
 -  PARCEL BOUNDARY
 -  SURFACE DRAINAGE / CREEK
 -  FENCE
 -  UTILITY POLE
 -  PROBABLE FIRING LINE AREA

FIGURE 1-9
SITE MAP
 FORMER ROCKET LAUNCHER RANGE
 PARCEL 229Q-X

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



1.2.2 Ranges South of the Area 45 Ranges

There are 12 ranges south of the Area 45 ranges and west of Iron Mountain Road, and includes the following ranges (Figure 1-10):

- Parcel 91Q-X, Dud Impact Area
- Parcel 114Q-X, Former Large Caliber Weapons Range
- Parcel 115Q, Former Small Arms Range
- Parcel 116Q-X, 60mm Mortar Range
- Parcel 117Q-X, Main Post Impact Area
- Parcel 129Q-X, Former Mock Vietnam Village
- Parcel 151Q, Former Rifle Range
- Parcel 200Q, Former Rifle Range
- Parcel 201Q, Former Rifle Range
- Parcel 231Q, Former Range O.Q.-2A
- Washington Tank Range
- 1950 Rocket Launcher Range.

Dud Impact Area, Parcel 91Q-X. FTMC training maps indicate that a Dud Impact Area, Parcel 91Q-X, is located a short distance south of Range 17, Explosives Proficiency Training Area, Parcel 73Q-X (Figure 1-11). This Dud Impact Area was observed during the EBS site visit and is considered a permanently dudded area (ESE, 1998). One EOD disposal pit and numerous ordnance items were observed during the EBS site visit. The majority of the ordnance items were identified by members of the 142nd EOD, stationed at FTMC, as being fragments of 2.36-inch bazooka rounds. One of these rounds appeared to contain explosives in the warhead (ESE, 1998).

IT personnel were unable to conduct a site walk in this area due to ongoing UXO remediation by EOD Technology, Inc., within the eastern bypass right-of-way.

Former Large Caliber Weapons Range, Parcel 114Q-X. This former range is located west of Iron Mountain Road (Figure 1-12). Ordnance fired at this range included unspecified large and small caliber weapons (ESE, 1998). Dates of use are unknown, but this site appears on 1957 aerial photos and a 1959 map. This range is identified on the 1959 map as a rifle range; however, 1957 aerial photographs display what appear to be hard targets arranged identically to those at one of the tank ranges at the northern Main Post boundary (ESE, 1998).