

2.0 Current Conditions

2.1 Site Description and Background

The ranges and parcels located off IMR that are included in this soil removal are:

- Skeet Range, Parcel 69Q
- Range 12 - Competitive Pistol Range, Parcel 70Q
- Range 13 - Qualification Pistol Range, Parcel 71Q

The IMR Range sites are located in the southwest part of the Main Post, east of Iron Mountain Road and south of Summerall Gate Road (Figure 1-1). The western facing slopes of Sunset Hill and the Baltzell Hills form the main range boundary to the east. The major surface water body is Remount Creek which flows from the south to the north. Several ephemeral tributaries drain surface water run off from the western hillsides into Remount Creek in the IMR Range area. Except for a historical former rifle grenade range at the Skeet Range, the IMR Ranges were mostly used for small caliber weapons training and shotgun firing and were active immediately prior to Base closure. Several of the ranges were built over land that was previously used for other types of training. Bullets, shot, and bullet fragments are found in high concentrations on the surface of many of the IMR Range impact zones.

These sites have been investigated during an environmental baseline study (EBS) performed by Environmental Science and Engineering, Inc. (ESE) prior to base closure in 1999 and various site investigation and RI sampling events performed by Shaw. Shaw's investigations are summarized in the draft RI report dated April 2004.

2.1.1 FTMC Site Description and History

FTMC is a U. S. Army facility that was closed under the Base Realignment and Closure program in September 1999. Located in northeast Alabama, near the city of Anniston in Calhoun County, FTMC consisted of three tracts of land: the Main Post, Choccolocco Corridor, and Pelham Range. The majority of development at FTMC is in the northwest area of the Main Post. The City of Anniston is located to the south and west of the Main Post; adjoining the Main Post installation to the east are the Choccolocco Mountains of the Talladega National Forest.

The Main Post, consisting of 18,929 acres, was purchased by the federal government in March 1917 for the construction of a National Guard camp (Camp McClellan). Pistol and rifle ranges were established north of the camp, automatic rifle and machine gun ranges were established southwest of the camp, and artillery firing ranges were established southeast of the camp toward

the Choccolocco Mountains. Camp McClellan expanded throughout the 1920s and 1930s. The advent of World War II in the 1940s brought continued growth for the installation. Most notably, the 22,245 acres of Pelham Range were purchased to the west of the Main Post in early 1940 for artillery, tank, and heavy mortar firing. Approximately 4,488 additional acres to the east of the Main Post (Choccolocco Corridor) were leased from the State of Alabama to connect the Main Post to the Talladega National Forest. Choccolocco Corridor was used for various range training activities. The lease was terminated in May 1998.

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

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

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

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

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

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

2.1.2 Site Description and History

The IMR Range sites are located in the southwest part of the Main Post, east of Iron Mountain Road and south of Summerall Gate Road. The western facing slopes of Sunset Hill and the Baltzell Hills form the main range boundary to the east. Figure 1-1 details the location of the ranges on the Main Post. This section summarizes available data on the physical, demographic, and other characteristics of the sites and surrounding areas. Figure 2-1 (Skeet Range) and Figure 2-2 (Range 12 and Range 13) are included to show the site features and layout. The EBC boundary is shown on both figures.

2.1.2.1 Skeet Range, Parcel 69Q and Former Rifle Grenade Range at Skeet Range, Parcel 222Q-X

According to the EBS (ESE, 1998) the Skeet Range was constructed in 1988 and was in operation until October 1998. The Skeet Range (13 acres) was built over the land formerly used for the Rifle Grenade Range at the Skeet Range, Parcel 222Q-X (1.7 acres). The area of the former rifle grenade range is completely encompassed by the Skeet Range parcel and therefore has not been separately investigated (Figure 2-1). Base personnel used the Skeet Range for clay skeet and trap shooting competition. Historically, weapons fired at the range consisted of .410-gauge, .12-gauge, .20-gauge, .28-gauge shotguns. The Archives Search Report (ASR) (USACE, 2001) indicated that the Skeet Range is within the impact zone of two UXO ranges: the rifle grenade range (Parcel 222Q-X) and the former Combat Range #2. Combat Range #2 was used from the Inter-war period until 1958 and the weapons used there included grenades (rifle), rockets, and machine guns. Due to past use and proximity to these historical ranges, UXO items (2.36-inch rockets and World War II-era rifle grenades) have been found in and around the Skeet Range area, particularly in the northern half of the range.

The site layout of the Skeet Range is shown on Figure 2-1. The range includes two sets of concrete firing lines with a total of 14 firing points, with a direction of fire to the east and southeast. The western slope of Sunset Hill (approximately 100 feet high relative to the range floor) serves as the main impact zone for the range. The range also included three concrete block houses for throwing skeet and one concrete trap bunker, a range office, covered picnic/shelter areas, and male and female latrines. All range structures except for the concrete firing lines have been demolished and removed since base closure. A gravel road leads from IMR to the gravel parking lot located west of the range firing lines. Trees in part of the southern half of the Skeet

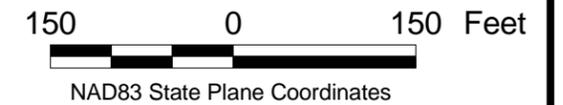


Figure 2-1

Skeet Range, Parcel 69Q and Former Rifle Grenade Range, Parcel 222Q-X Site Features

Legend

-  Study Area
-  Building/Former Building
-  Wooded Area
-  Not Wooded
-  Roads
-  Surface Drainage Feature (dashed where intermittent)
-  Topographic Contour (5-foot interval)
-  Eastern Bypass Corridor



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Range nearest to IMR (along Remount Creek) have been recently cleared by ALDOT to prepare for the EBC construction. Appendix A includes historical site photographs of the Skeet Range. All structures at the Skeet Range have been removed by the Army.

2.1.2.2 Range 12, Parcel 70Q

Range 12 was described in the EBS as constructed in 1951 and was in operation until October 1998. When the range was built, it was first listed as "Range 14" and was described as a "1000-inch range." By 1967, the range was renamed Range 12, the Competitive Pistol Range. Historically, weapons fired at the range consisted of 9-millimeter (mm) pistol and unidentified machine guns. FTMC Base Regulation 350-2 states .22 to .45-caliber pistols, 9-mm pistols, .22-caliber rifles, and .12-gauge shotguns were fired at Range 12. Interviews conducted by ESE with long-term FTMC employees for the EBS indicate that an area around Range 12 and Range 13 was used as a machine gun range in the 1960s. A map, dated 1966, confirms the interview reports identifying a range in the vicinity of Range 12 and Range 13 as a "Machine gun range, 30 m, Basic."

The total site, including the range fan, consists of 311 acres. The main area of the site subject to this evaluation is limited to approximately 5 acres. Figure 2-2 displays the site details for Range 12, including a formerly covered concrete firing line 35 meters from the base of the hill that served as the main target zone/bullet impact area for the range. This firing line was 275 feet in length and paralleled IMR, traversing the site north to south. The covering and concrete foundation has been demolished and removed from the range. Four additional firing lines, at 25 meters, 15 meters, and 7 meters from the base of the hill, parallel the 35 meter firing line. These firing lines ran along the horizontal area between the covered line and the target zone. Nine outbuildings and supporting structures were included at Range 12. These buildings, which were removed in 1999, have been identified as: male and female latrines, a target house, two concrete pads/foundations that may have been former structures, covered bleachers, and sheds. The main target zone/bullet impact area consists of the north and west facing slopes of a hill approximately 200 feet high. Site access is via a semi-circular gravel road that connects the firing line area to Range 13 to the north and IMR to the west. Much of the Range 12 area has been cleared for the EBC construction and has been recently reused as a staging area by the USACE-Huntsville for UXO operations. Appendix A includes historical site photographs of Range 12.

2.1.2.3 Range 13, Parcel 71Q and Aboveground Storage Tank at Range 13, Parcel 176(7)

As described in the EBS, Range 13, the Qualification Pistol Range, was constructed in 1951 and was in operation until October 1998. This range was most recently used by U.S. Marine Corps

personnel stationed at FTMC for small arms training. Historically, weapons fired at the range consisted of 9-mm pistol and unidentified machine guns. FTMC Base Regulation 350-2 states .22 to .45-caliber pistols, 9-mm pistols, .22-caliber rifles, and .12-gauge shotguns were fired at Range 13. Spent rifle cartridge casings have been found at Range 13, indicating some larger caliber rifle firing may have also occurred. There is some evidence that this area may have been used as a machine gun range in the 1960s. The ASR does not describe this range as an area where UXO should be a main concern and none has been found by Shaw personnel during site investigation activities. The aboveground storage tank (AST) at Range 13 was a 500-gallon capacity tank used to supply No. 2 fuel oil for heating the Range 13 office. The EBS reports that during an audit which was conducted prior to base closure, the AST was found to be leaking and no drip pan was present. This AST was therefore assigned the parcel designation 176(7) in the EBS for tracking and reporting purposes.

The total site, including the range fan, encompasses 549 acres. The main area of the site subject to this evaluation is limited to approximately 5 acres. Figure 2-2 displays the site details for Range 13. Range 13 included a 20-station covered firing line that was 120-feet long and was located 35 meters west of an electrified target line. The firing lines and electrified target lines were removed from the range in 1999. The direction of fire at Range 13 was east, towards the target line and a small soil berm which serves as the main impact zone for this portion of the range. The small soil berm is located immediately behind the electrified target line (approximately 25 to 30 feet further downrange). At a distance of approximately 150 feet further east of the small berm, a secondary impact zone is formed by the natural hillside contour that parallels the first berm. Both impact zones contain bullets and fragments on the surface.

Immediately to the south of the existing covered firing line, depressions were found in the soil that indicate a second covered firing line previously existed. The approximate length of this structure was 180 feet. In addition to the depressions on the ground, two large signs are located on the hillside to the east indicating the northern and southern limits of the range. The presence of bullets and fragments on the hillside correspond to the location of these signs.

Several outbuildings and supporting structures were included at Range 13. These buildings, which were removed in 1999, have been identified as a target house, range tower, two concrete pads/foundations that may have been former structures, and sheds. Site access is via a semi-circular gravel road that connects the firing line area to IMR on the north and to Range 12 on the south. The southern part of the range and the area between Range 13 and Range 12 has been recently used by the USACE-Huntsville for ongoing UXO operations in the EBC. Historical site photographs of Range 13 are included in Appendix A.

2.2 Summary of Previous Investigations

EBS. An EBS was conducted by ESE to document current environmental conditions of all FTMC property (ESE, 1998). The study was to identify sites that, based on available information, have no history of contamination and comply with U.S. Department of Defense guidance for fast-track cleanup at closing installations. Of the IMR Range parcels, only the former AST at Range 13, Parcel 176(7), was given one of these Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) categories – “7. Areas that are not evaluated or require further evaluation.”

For non-CERCLA environmental or safety issues, the parcel label includes the following components: a unique non-CERCLA issue number, the letter "Q" designating the parcel as a Community Environmental Response Facilitation Act (CERFA) Category 1 Qualified Parcel, and the code for the specific non-CERCLA issue(s) present (ESE, 1998). The non-CERCLA issue codes used are:

- A = Asbestos (in buildings)
- L = Lead-based paint (in buildings)
- P = Polychlorinated biphenyls
- R = Radon (in buildings)
- RD = Radionuclides/radiological issues
- X = UXO
- CWM = Chemical warfare material.

The IMR Ranges were classified with a unique non-CERCLA issue number, followed by the letter “Q.” The “Q” designates the parcel as a CERFA Category 1 Qualified Parcel. Category 1 sites are areas where no storage, release, or disposal (including migration) has occurred. The historical former rifle grenade range at the Skeet Range, Parcel 222Q-X was also assigned the “X” designation for UXO.

RI. The IMR RI Report (Shaw, 2004) summarized and evaluated the nature and extent of contamination present in the IMR small arms ranges, evaluated the future risks to human health and the environment, and provided a basis for selecting remedial alternatives presented in the focused feasibility study. The RI field activities at the IMR Ranges were performed in several stages starting with March/April 2000 and concluding in May 2003.

An RI was conducted to determine the nature and extent of suspected contamination at the IMR Ranges. The primary contaminants were assumed to be mostly metals from the residual bullets

and shot fragments present from historical weapons training activities. Many RI soil samples were analyzed for target analyte list (TAL) metals or only lead. Select samples were submitted for additional analyses to assess other potential contaminants of concern, including target compound list (TCL) volatile organic compounds (VOC), TCL semivolatile organic compounds (SVOC), nitroaromatic explosive compounds, chlorinated pesticides and organophosphorus pesticides, chlorinated herbicides, polychlorinated biphenyl (PCB) compounds, perchlorate, and cyanide. Soil pH and total organic carbon measurements were also performed. Additional analyses were requested for impact zone sample locations where high concentrations of lead were suspected and in range support areas where organic solvents may have been used for gun cleaning and maintenance. Groundwater samples were analyzed for TAL metals, VOCs, SVOCs, nitroaromatic explosive compounds, and perchlorate. Sediment and surface water samples were analyzed for TAL metals, nitroaromatic explosive compounds, and perchlorate. Sediment samples were also analyzed for total organic carbon and grain size.

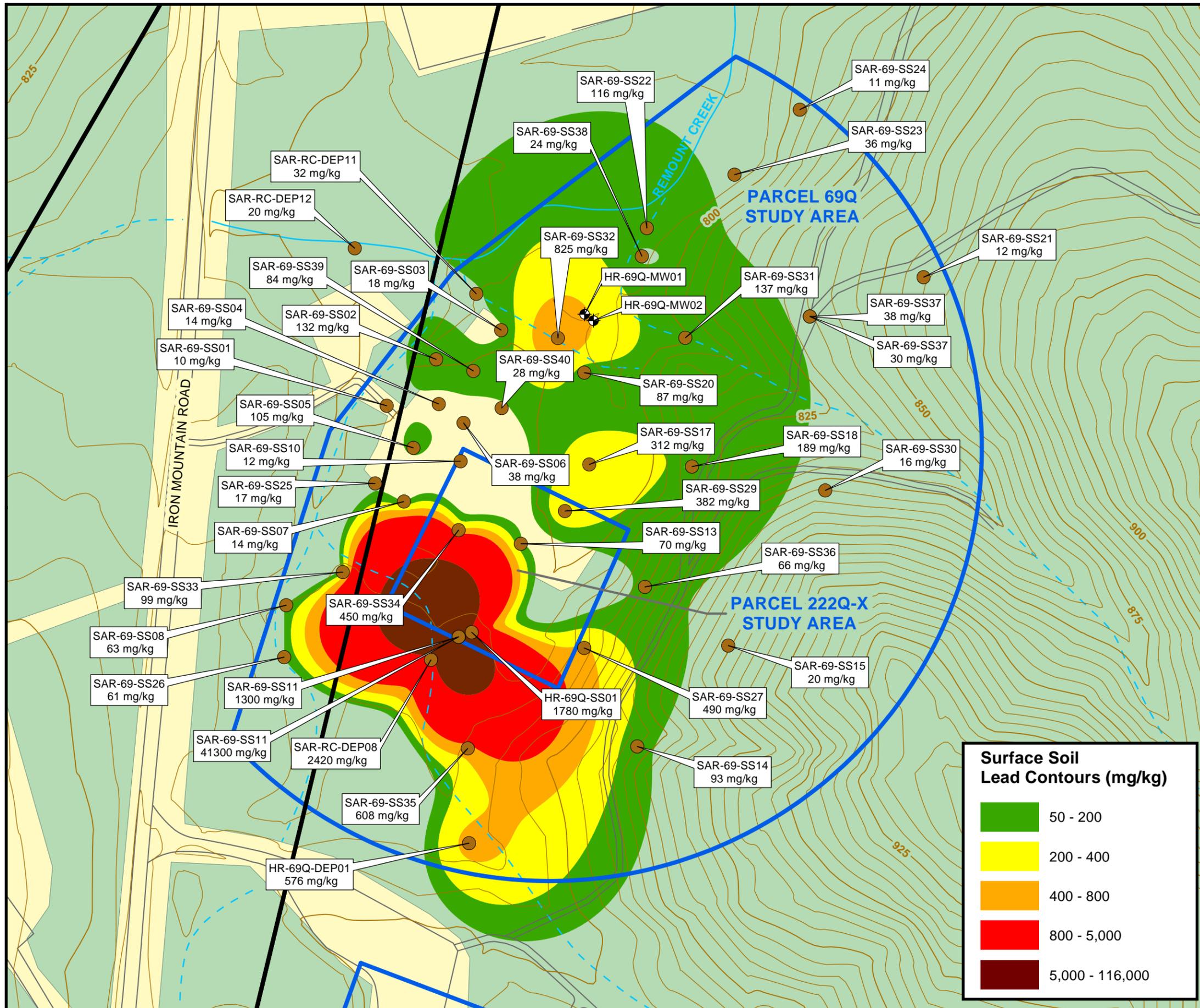
A total of 120 surface and depositional soil, 36 subsurface soil, 6 groundwater, and 9 surface water/sediment samples were collected and analyzed from the IMR Ranges. In addition to the collection and analysis of soil samples from the ranges, a visual survey was performed at Range 19, Range 13, and Range 12 to address the horizontal extent of bullet fragments in the impact zones of these ranges.

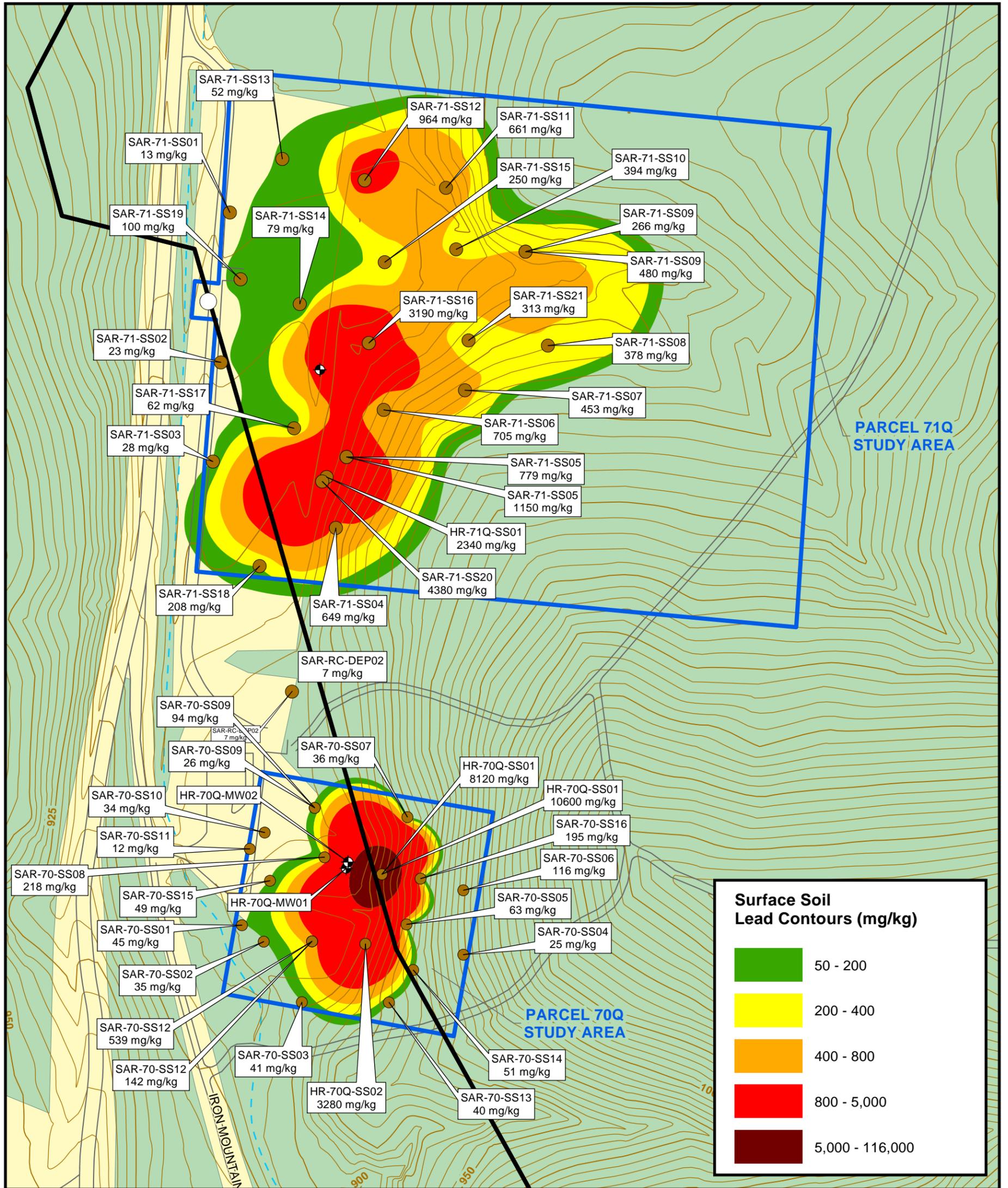
The RI report concluded metals contamination in surface soil (specifically lead, antimony, arsenic, copper and manganese) was prevalent with exceedences of risk-based criteria at the Skeet Range, Range 19, Range 13, and Range 12 (Figures 2-3 and 2-4). Exceedences of lead were also found at the Former Rifle Grenade Range, Parcel 221Q-X. At the Skeet Range, surface soil, surface water and sediment results indicate metals contamination in those matrices. Few subsurface soil sample results indicate the depth of contamination extends more than one foot below surface. In the case of the ranges that were active until base closure, the metals contamination is confined to the portion of the range that served as the impact zone, i.e., the area downrange of the target lines where bullets and shot struck the surface. Bullets, bullet fragments, and shot are clearly visible on the surface in the range impact zones. Impact zone areas at Range 19, Range 13, and Range 12 are generally characterized as heavily eroded and steeply sloped natural hillsides with little to moderate vegetative cover. The Skeet Range impact zone is moderately sloped and densely wooded. Samples from several tributary ephemeral streams of Remount Creek present in the impact zone of the Skeet Range show sediment and surface water metals contamination is present.

Figure 2-3

IMR RI Report

Lead in Surface Soil Isocontour Map Skeet Range, Parcel 69Q and Former Rifle Grenade Range, Parcel 222Q-X Fort McClellan, Alabama





Legend

- Study Area
- Not Wooded
- Wooded
- Roads
- Surface Drainage Feature (Dashed where Intermittent)
- Topographic Contour (25-foot interval)
- Eastern Bypass Corridor

N

100 0 100 Feet

NAD83 State Plane Coordinates

Figure 2-4

IMR RI Report

Lead in Surface Soil Isoconcentration Map
Range 12, Parcel 70Q and Range 13, Parcel 71Q

Shaw Environmental, Inc.

U.S. Army Corps of Engineers
Mobile District

In addition to metals, surface soil samples collected at the Skeet Range, Range 13 and Range 12 contained few organic compounds that were detected exceeding the ecological screening values:

- Four polychlorinated aromatic hydrocarbon (PAH) compounds in two Skeet Range samples
- Eight chlorinated pesticide compounds in seven samples from Skeet Range, Range 12 and Range 13
- Azinphosmethyl (an organophosphorus pesticide) in one Skeet Range sample
- Aroclor 1260 (a PCB compound) in two Range 13 samples.

Three of the PAH results in two surface soil samples from the Skeet Range also exceeded the human health site-specific screening level (SSSL). One subsurface soil sample at the Skeet Range also contained the PAH compound benzo(a)pyrene in a concentration that exceeded the SSSL.

Groundwater sample results showed five metals (arsenic, iron, manganese, barium and beryllium) were present in concentrations that exceeded the SSSL. Of these results, two manganese, one barium, and one beryllium concentrations exceeded both background screening and SSSL. One nitroexplosive compound, 4-amino-2,6-dinitrotoluene, exceeded the SSSL in one sample.

The RI report included an evaluation of the data, a summary of the nature and extent of contamination, a discussion of contaminant fate and transport, human health and ecological risk assessments, and a set of recommendations to address the IMR Ranges. Based on the results of the RI, the report concluded that no further investigation was required to determine nature and extent of soil, surface water, sediment, and groundwater contamination to select, design, and execute a remedial action at the IMR Ranges.