# United States Department of the Interior

**FISH AND WILDLIFE SERVICE**

**Mountain Longleaf NWR**

**407 Bains Gap Road**

**Anniston, Alabama 36201**

09/03/2019

Dear Owen Nuttall,

The United States Fish and Wildlife Service, Mountain Longleaf National Wildlife Refuge (NWR) concurs with the Land Use Control Implementation Plans (LUCIPs) for the three designated lead remediation areas, 81mm Mortar Range, Bains Gap Road Ranges and T24A. The restriction of no residential building on the sites outlined within the LUCIPs provides no restrictions with the Refuge's current capabilities and management plans to allow the public to enjoy normal outdoor recreational activities throughout these areas of Mountain Longleaf NWR.

Thank you

Richard P. Ingram
Project Leader
Wheeler NWR Complex
256-353-7243 ext 23

Signature: Richard P. Ingram

# Land Use Control Implementation Plan for Former Bains Gap Road Ranges

## Fort McClellan
## Calhoun County, Alabama

**Prepared for:**

**U.S. Army Corps of Engineers, Mobile District**
**109 St. Joseph Street**
**Mobile, Alabama 36602**

**Prepared By:**

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**Contract No. W912DY-10-D-0023**
**Task Order CK01**

**Revised June 2019**

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## *List of Acronyms*

| | |
|---|---|
| ADEM | Alabama Department of Environmental Management |
| Army | Department of the Army |
| BGR | Bains Gap Road |
| CERCLA | Comprehensive Environmental Response, Compensation and Liability Act |
| COC | chemical of concern |
| EBS | Environmental Baseline Study |
| ESE | Environmental Science and Engineering, Inc. |
| FFS | focused feasibility study |
| FTMC | Fort McClellan |
| LUC | land use control |
| LUCAP | land use control assurance plan |
| LUCIP | land use control implementation plan |
| mg/kg | milligrams per kilogram |
| USACE | U.S. Army Corps of Engineers |
| USFWS | U.S. Fish and Wildlife Service |
| RI | remedial investigation |
| ROD | Record of Decision |
| Shaw | Shaw Environmental, Inc. |
| XRF | X-ray fluorescence |

# 1.0 Introduction

The Army completed an environmental response action at the former Fort McClellan under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA 42 U.S.C. 9601 et. seq.). Land Use Controls (LUC) were a component of the selected remedy. This Land Use Control Implementation Plan (LUCIP) applies to the former Bains Gap Road (BGR) Ranges that are located on U.S. Fish and Wildlife Service (USFWS) property at the former Fort McClellan in Calhoun County, Alabama. The Department of the Army (Army) transferred the property to the USFWS in 2003 and the site is now part of the *Mountain Longleaf National Wildlife Refuge* (hereafter referred to as the Refuge). This LUCIP complies with requirements set forth in the Land Use Control Assurance Plan (LUCAP) (Army, 2001) signed by the Army, the U.S. Environmental Protection Agency, the Alabama Department of Environmental Management (ADEM), and the Calhoun County McClellan Development Authority, successor to the Anniston-Calhoun County Fort McClellan Development Joint Powers Authority.

A Record of Decision (ROD) for the former BGR Ranges was finalized in April 2014 (Shaw Environmental, Inc. [Shaw], 2014). The final ROD was signed by the Army on August 9, 2014. The ROD summarizes the results of a remedial investigation (RI), focused feasibility study (FFS), and proposed plan for the BGR Ranges and documents the Selected Remedy to address soil and sediment contamination at the ranges. Soil/sediment at the BGR Ranges is contaminated with chemicals of concern (COC), primarily lead, at concentrations exceeding cleanup levels established for the former BGR Ranges. The ROD addressed the major components of the Selected Remedy [Alternative 3b from the FFS (Shaw, 2013a)] which include the following:

- ***Temporary Stream Diversion.*** Excavation of stream sediment would be performed for the perennial stream sections where COC (i.e., lead and copper) concentrations in sediments exceed the ecological cleanup levels. Sediment removal would be accomplished by isolating and dewatering the stream sections through the placement of temporary upstream and downstream dams constructed from sandbags. The isolated section would then be dewatered using a temporary pipe through the work area or using a system of dewatering pumps.
- ***Excavation of Soil & Sediment.*** The Selected Remedy involves the excavation of soil and stream sediment at the ranges where the concentrations of lead and the other COCs (antimony, copper, and zinc) exceed the cleanup levels selected for protection of ecological receptors and industrial/recreational site users.
- ***On-site stabilization***. The excavated soil and sediment will be treated onsite using a reagent-based stabilization technology, referred to as stabilization.

- ***Off-site disposal***. The treated soil/sediment would be considered nonhazardous special waste rather than a hazardous waste for disposal purposes. Therefore, the stabilized material would be disposed of off-site as nonhazardous special waste at a permitted Subtitle D disposal facility.
- ***Land use controls***. Because the selected remedy would not achieve cleanup to a concentration that would allow unrestricted reuse, land use controls (LUC) that prohibit unrestricted use would be required for portions of the site where lead concentrations continue to exist in soil above the residential cleanup level of 400 milligrams per kilogram (mg/kg).

No remedy selection was warranted for any other media (i.e., groundwater, surface water) at the former BGR Ranges. The Selected Remedy was implemented in 2015 through 2017 as detailed in Section 2.5 below.

The cleanup was based on protection of ecological receptors and industrial/recreational site users, consistent with the current and expected future land use of the property. Because the soil removal action did not achieve cleanup to unrestricted (residential) use standards, the final ROD specified that the Army would implement LUCs to prohibit unrestricted use of the site and conduct five-year reviews to ensure that the remedy is protective of human health and the environment. This document specifies the LUC objectives; describes the actual LUCs; provides the LUC monitoring, maintenance, and enforcement requirements; and identifies the conditions under which the LUCs may be reduced or removed at the former BGR Ranges.

## 2.0 Site Description and History

The former Fort McClellan (FTMC) is located in the foothills of the Appalachian Mountains of northeastern Alabama near the cities of Anniston and Weaver in Calhoun County. FTMC consisted of three main areas: Main Post, Pelham Range, and Choccolocco Corridor, a 4,488-acre tract of land that was leased from the State of Alabama until May 1998. The Main Post, which occupied 18,929 acres, is bounded on the east by the Choccolocco Corridor, which previously connected the Main Post with the Talladega National Forest. Pelham Range, which occupies 22,245 acres, is located approximately 5 miles due west of the former Main Post and adjoins the Anniston Army Depot to the south. The Refuge is located in the eastern portion of the former Fort McClellan's Main Post. The property encompasses approximately 9,000 acres and contains large stands of mountain longleaf pine. The military used this area in various types of training from 1912 (and possibly as early as 1898) to 1999.

The former BGR Ranges consist of a series of former weapons firing ranges located adjacent to one another immediately south of Bains Gap Road in the eastern-central portion of the former

FTMC Main Post (Figure 1). The BGR Ranges consist of the following ranges and parcels (Figure 2):

- Former Range 24 Upper, Parcel 80Q
- Former Range 21, Parcel 77Q
- Former Range 22, Parcel 78Q and Former Mortar Range (Firing Line), Parcel 109Q
- Former Range 27, Parcel 85Q

Each of the ranges and associated parcels are described further below. Conditions represent those prior to the site investigations and remedial investigations performed.

### *2.1 Former Range 24 Upper, Parcel 80Q*

Range 24 Upper is a densely wooded area located immediately south of Bains Gap Road. An unimproved road connects this area to Bains Gap Road east of the parcel and a second unimproved road on the southwest side of the parcel connects Range 24 Upper to the area east of Range 21. Site drainage is to the west along two ditches that join west of the parcel near Range 21.

Range 24 Upper was constructed between 1983 and 1989 and deactivated in 1990. Weapons fired at this range consisted of M-16 rifles with tracers (white phosphorus) and flares. The direction of fire was to the south-southeast. The study area covers about 11 acres and does not have a defined safety fan. The site has few remaining distinguishing features or intact structures. Barren areas present were small impact zones (soil mounds) with pop-up targets similar to those found on other FTMC ranges. Some of these areas have been disturbed and graded, and limited evidence of the impact mounds, pop-up targets, or foxholes remains. Bullet fragments have been found in these areas.

In addition to the small-arms training, an 81-millimeter mortar range (listed as old Range 28) covered the area of Range 24 Upper (U.S. Army Corps of Engineers [USACE], 2001). The firing point for this mortar range appears to have been just south of Bains Gap Road. The impact area was located south-southeast toward the hills beyond. The mortar range was abandoned in 1967 (USACE, 2001).

### *2.2 Range 21, Parcel 77Q*

Range 21 is a flat open area mostly covered with grass and some trees. Wooded areas are located east and south of the site. Five target lines were used at the range: 25, 50, 75, 175, and 300 meters. The single firing line and the target lines are all located within the flat open area. This site lacks a definitive soil berm downrange that would usually form a target berm. The area between Cane Creek and the 175-meter target line has eroded. Bullet fragments have been

observed on the ground surface of the range. The concrete structures that were used to store and present pop-up targets during training exercises have been removed. Site access is via three gravel roads that connect the firing line area to Bains Gap Road.

Range 21 was used from 1951 through installation closure in 1999. Weapons fired at this range consisted of M-16 rifles (5.56 mm) with tracers. The Environmental Baseline Survey (EBS) indicates that white phosphorus was used as the tracer material for M-16 training at some of the BGR Ranges. Unspecified small arms were also used at this range prior to the M-16 (Environmental Science and Engineering, Inc. [ESE], 1998). The study area consisted of an approximately 25-acre area that included the firing line, range floor, and target area.

### *2.3 Range 22, Parcel 78Q and Former Mortar Range (Firing Line), Parcel 109Q*

Range 22 and the Former Mortar Range (Firing Line) are located on a flat, open area with a rocky soil berm that forms the main impact zone. The RI study area for Range 22 (including the Former Mortar Range firing line) was approximately 18 acres, which encompassed the firing line, range floor, and target area. On the eastern portion of the range, the berm height is reduced, and the impact zone extends into the wooded area south of the target line. Cane Creek flows to the west along the base of the berm. No structures are present at the site. Access to the site is via a gravel road that connects the firing line area to Bains Gap Road.

Range 22 was a rifle range used from 1961 through installation closure in 1999. Weapons fired at this range consisted of M-16 rifles (5.56 mm) with tracers. Range 22 had a single firing line and a single target line at 25 meters.

Parcel 109Q is a 1.5-acre parcel located within the Range 22 area. This parcel is the firing line area for a historical mortar range (dates of operation unknown) where 81-mm and 60-mm mortars may have been fired (ESE, 1998). Probable impact zones for this range are located south of Range 24 Upper and have been investigated and reported separately (IT Corporation, 2002).

### *2.4 Range 27, Parcel 85Q*

Range 27 was referred to as the Special Operations Range. This range was historically subdivided into four main areas: Range 27A - Shooting House; Range 27B - Live Fire and Maneuver Close Quarters Battle Range; Range 27C - Stress Pistol and Shotgun Range; and Range 27D - Pistol and Submachine Gun Qualification Range. Cane Creek flows to the west across the entire width of the range; two tributaries merge with Cane Creek in the western

portion of the range. Access to the site is provided by a gravel road that connects the firing line areas of Ranges 27B and 27C to Bains Gap Road.
Conflicting information exists regarding the site history of Range 27. The Archives Search Report indicates that the range was built after World War II, and it appears on the 1958 Range Map as Close Combat 1 and 2 (USACE, 2001). The EBS indicates that the range was "in use from 1976 through the present" and that weapons fired at this range consisted of M-16 rifles (5.56 mm) between 1983 and 1989; and 9mm pistol, 12-gauge shotgun, and .45-caliber pistol and machine gun "from 1989 to present" (ESE, 1998). The study area for Range 27 was approximately 26 acres and encompassed the firing line, range floor, and target area.

Range 27A, the Shooting House, was constructed of stacks of tires that were staked upright using 4-by-4-inch wood posts and filled with sand to simulate the walls of rooms. The "house" had a gravel floor and no roof. The Army used the shooting house for live-fire training exercises. Wooden doors and interior divider walls in the structure sustained heavy damage from training, and bullets could be found in the tires and wood. Demolition, removal, and off-site disposal of the shooting house were performed in 2009 (TetraTech, 2011).

Range 27B consists of a flat, open area between two soil berms that lie roughly perpendicular to Bains Gap Road. Range 27C is a large, flat, open area separated from Range 27B on the east and Range 27D on the west by perpendicular soil berms. This area may have once contained a rappelling tower and obstacle course. No structures currently remain. Range 27D is a narrow area in the far western portion of Range 27. Numerous bullets and fragments are present along the base of an unnamed hill to the south and in Cane Creek.

Today, the former BGR Ranges are located within the *Mountain Longleaf National Wildlife Refuge*, which is managed by the USFWS.

## *2.5 Previous Investigations and Response Actions*

- ***Environmental Baseline Survey***. An EBS prepared by Environmental Science and Engineering, Inc. in 1998 classified the former BGR Ranges as Category 1 Qualified parcels. Category 1 parcels were defined as those areas where no release or disposal of hazardous substances or petroleum products occurred (including no migration of these substances from adjacent areas). However, the parcels were qualified because chemicals of potential concern and/or munitions and explosives of concern may be present as a result of historical range activities.

- ***Remedial Investigation***. Shaw conducted an RI at the former BGR Ranges between 2000 and 2003 to define the vertical and horizontal extent of contamination identified in site media. Supplemental RI sampling was performed in 2007/2008 to collect additional soil and groundwater data at the request of ADEM. The combined RI fieldwork consisted of the collection and analysis of 191 surface and depositional soil samples, 73 subsurface soil samples, 21 groundwater samples, 45 surface water and sediment samples, and one seep sample. In addition, 18 monitoring wells were installed to facilitate collection of groundwater samples and provide site-specific hydrogeological information. The RI field activities also included the collection of 40 x-ray fluorescence (XRF) soil screening samples. The RI determined that soil and sediment at the BGR Ranges is contaminated with lead and other metals (i.e., antimony, copper, and zinc) associated with small arms ammunition from historical use as weapons firing ranges (Shaw, 2009).

- ***Remedial Action at Selected Sites within the Charlie Area at Fort McClellan.*** Tetra Tech performed munitions response activities at 36.7 acres at the Range in 2009 as part of a larger effort across the Fort McClellan ranges. The area was geophysically mapped and cleared of munitions potentially presenting an explosive hazard to the depth of detection, and removal of firing points and drainage structures were performed (TetraTech, 2011).

- ***Soil Remedial Action.*** In 2015 through 2017, HydroGeoLogic, Inc. (HGL) implemented the Selected Remedy at the former BGR Ranges to remove contaminated soil and sediment with concentrations of lead and the other COCs (antimony, copper, and zinc) above the cleanup levels presented in the Final ROD. The cleanup levels for the soil COCs were as follows:

    - Antimony – 18 mg/kg
    - Copper – 334 mg/kg
    - Lead – 500 mg/kg (surface soil); 800 mg/kg (subsurface soil).
    - Zinc – 100 mg/kg.

  The cleanup levels for the sediment COCs were as follows:

    - Copper – 69 mg/kg.
    - Lead – 68 mg/kg.

  The remedial action successfully removed the COCs to concentrations below the cleanup levels as documented in the Remedial Action Completion Report (HGL, 2018). A total of 95,931 tons of contaminated soil/sediment were excavated, treated onsite using a reagent-based stabilization process as necessary, and transported and disposed as nonhazardous special waste at an offsite permitted Subtitle D disposal facility. Because the remedial action did not achieve cleanup to a concentration that would allow for unrestricted future site use, LUCs will be required for the site.

The LUCs for the former BGR Ranges are briefly discussed in the following sections.

# 3.0 Land Use Control Objectives

Because the Selected Remedy (Alternative 3b, temporary stream diversion, excavation of soil/sediment, LUCs, on-site stabilization, and off-site disposal) did not achieve cleanup to a concentration that would allow unrestricted reuse, LUCs as described in Section 4.0 will be required for portions of the site (including intermittent streams) where lead remains in soil above the residential cleanup level. The LUC areas were determined based on surface lead concentrations above 400 mg/kg, including results from the removal action and previous studies that used XRF surveys. All subsurface results at the site were below 800 mg/kg and do not impact the LUC areas. To the extent practicable the areas were selected to maximize land use but be as contiguous as possible to minimize inspection burden in the future. LUCs will not be required for the sediment removal areas because the cleanup levels for the sediment COCs (i.e., copper and lead), which are based on protection of ecological receptors, are below residential cleanup levels. Also, the cleanup level for zinc in soil (based on protection of ecological receptors) is below the residential cleanup level.

The overall objective for the LUCs described in this LUCIP is to prevent unacceptable risk to human health and the environment and to promote human safety by minimizing the potential for exposure to any substances that may present an unacceptable risk. The purpose of the LUCs is to prohibit residential use of the former BGR Ranges where concentrations of lead exceed the residential cleanup level. The soil excavation areas are shown on Figure 3. Areas where LUCs will be implemented encompass approximately 35.2 acres (estimated area where lead will remain above the residential cleanup level in soil) at the former BGR Ranges, as shown on Figure 4.

# 4.0 Description of Land Use Controls

The following LUCs have been implemented to meet the objectives in Section 3.0.

## 4.1 Land Use Restrictions

Residential use is prohibited in all LUC Areas. Under EPA guidance and the Alabama Risk-Based Corrective Action Guidance, “unrestricted use” refers to “residential use” and includes, but is not limited to, schools, dwellings, homes, hospitals, child-care centers, nursing homes, playgrounds, recreation centers, and any other areas/structures with sensitive human activity (ADEM, 2017).

Commercial use is prohibited in LUC Area 5. Under EPA guidance and the Alabama Risk-Based Corrective Action Guidance, “commercial use” includes, but is not limited to, gas stations, industrial operations, stores, businesses, fleet operations, etc., where employees work, but do not

reside, on a continuing basis. Hotels, motels, and other transient activities are included in the commercial definition (ADEM, 2017).

### *4.2 Land Use Control Mechanisms*

- The USFWS or its successor will conduct annual inspections and reviews of these LUCs to verify that the LUCs have not been violated.

### *4.3 Legal Description of Land Use Control Boundary*

Parcels of land (collectively 35.2 acres, more or less) situated in Section 24, lying in Township 15 South, Range 8 East, Huntsville Meridian, Calhoun County, Alabama, and being more particularly described as follows:

POINT OF BEGINNING being an unmarked point LUC Area 1 (Point 1 on Figure 4) having Alabama State Plane, East Zone Coordinates of North 1169268.62 and East 678903.09, runs thence as follows:

North 90 degrees 0 minutes 0 seconds East, 125 feet;
South 0 degrees 0 minutes 0 seconds East, 85 feet;
South 90 degrees 0 minutes 0 seconds West, 125 feet;
North 0 degrees 0 minutes 0 seconds West, 85 feet to the point of beginning.

POINT OF BEGINNING being an unmarked point LUC Area 2 (Point 5 on Figure 4) having Alabama State Plane, East Zone Coordinates of North 1168910.17 and East 678205.38, runs thence as follows:

North 87 degrees 20 minutes 24 seconds East, 100 feet;
South 3 degrees 52 minutes 48 seconds East, 135 feet;
South 87 degrees 20 minutes 24 seconds West, 100 feet;
North 3 degrees 52 minutes 48 seconds East, 135 feet to the point of beginning.

POINT OF BEGINNING being an unmarked point LUC Area 3 (Point 9 on Figure 4) having Alabama State Plane, East Zone Coordinates of North 1168894.25 and East 678485.84, runs thence as follows:

North 45 degrees 0 minutes 0 seconds East, 290 feet;
North 59 degrees 34 minutes 12 seconds East, 105 feet;
South 57 degrees 20 minutes 24 seconds East, 455 feet;

South 34 degrees 28 minutes 12 seconds West, 90 feet;
North 63 degrees 21 minutes 0 seconds West, 355 feet;
South 51 degrees 44 minutes 24 seconds West, 310 feet;
North 35 degrees 25 minutes 12 seconds West, 115.6 feet to the point of beginning.

POINT OF BEGINNING being an unmarked point LUC Area 4 (Point 16 on Figure 4) having Alabama State Plane, East Zone Coordinates of North 1169611.89 and East 679410.59, runs thence as follows:

North 87 degrees 44 minutes 24 seconds East, 690 feet;
North 59 degrees 44 minutes 24 seconds East, 125 feet;
South 88 degrees 25 minutes 12 seconds East, 415 feet;
South 32 degrees 14 minutes 24 seconds East, 435 feet;
South 12 degrees 0 minutes 36 seconds East, 380 feet;
South 22 degrees 37 minutes 12 seconds West, 30 feet;
South 13 degrees 40 minutes 12 seconds West, 622 feet;
North 69 degrees 55 minutes 48 seconds West, 535 feet;
North 14 degrees 49 minutes 48 seconds East, 215 feet;
South 80 degrees 55 minutes 48 seconds West, 290 feet;
North 50 degrees 17 minutes 24 seconds West, 355 feet;
North 20 degrees 40 minutes 48 seconds East, 281.1 feet to the point of beginning.

POINT OF BEGINNING being an unmarked point LUC Area 5 (Point 22 on Figure 4) having Alabama State Plane, East Zone Coordinates of North 1168923.34 and East 680922.45, runs thence as follows:

South 14 degrees 2 minutes 24 seconds East, 260 feet;
South 49 degrees 28 minutes 48 seconds West, 175 feet;
South 52 degrees 40 minutes 48 seconds East, 260 feet;
South 34 degrees 16 minutes 48 seconds West, 80 feet;
North 56 degrees 9 minutes 36 seconds West, 275 feet;
South 34 degrees 29 minutes 24 seconds West, 135 feet;
North 44 degrees 17 minutes 60 seconds West, 560 feet;
North 13 degrees 40 minutes 12 seconds East, 622 feet to the point of beginning.

POINT OF BEGINNING being an unmarked point LUC Area 6 (Point 34 on Figure 4) having Alabama State Plane, East Zone Coordinates of North 1168861.72 and East 681510.21, runs thence as follows:

South 68 degrees 27 minutes 0 seconds East, 95 feet;
South 79 degrees 50 minutes 24 seconds East, 185 feet;
North 77 degrees 21 minutes 36 seconds East, 265 feet;
North 26 degrees 54 minutes 36 seconds East, 125 feet;
North 90 degrees 0 minutes 0 seconds East, 220 feet;
South 14 degrees 41 minutes 24 seconds East, 230 feet;
South 87 degrees 22 minutes 12 seconds West, 445 feet;
South 59 degrees 41 minutes 24 seconds West, 170 feet;
North 80 degrees 26 minutes 24 seconds West, 325 feet;
North 13 degrees 34 minutes 12 seconds East, 100 feet;
South 63 degrees 25 minutes 48 seconds West, 65 feet;
South 79 degrees 44 minutes 24 seconds West, 60 feet;
North 69 degrees 18 minutes 26 seconds West, 115 feet;
North 0 degrees 40 minutes 12 seconds West, 50 feet;
South 71 degrees 7 minutes 48 seconds East, 120 feet;
North 64 degrees 8 minutes 24 seconds East, 155.6 feet to the point of beginning.

# 5.0 Monitoring, Maintaining, and Enforcing Land Use Controls

The USFWS is responsible for monitoring, maintaining, and enforcing the LUCs specified in Section 4.0. The USFWS shall report any observed LUC violations to the Army and ADEM and take other appropriate preventive action if danger to human health and the environment is indicated.

Should a third party violate the terms and intent of these LUCs, the USFWS will attempt to resolve the violation with the offender and, if not corrected within 30 days, USFWS will consider use of all options (e.g., civil action, criminal prosecution) available to correct the violation.

## 6.0 Reducing or Removing Land Use Controls

The LUCs are required because the lead levels are above those allowed for residential use and shall remain in effect until:

a. Changes in applicable Federal and State risk-based cleanup standards indicate that site contaminants no longer pose an unacceptable risk; or
b. There is a reduction in site contaminant concentrations to below Federal and State residential risk-based cleanup standards.

and

c. Until a request to remove or reduce the LUCs has been approved by ADEM.

## 7.0 Points of Contact

Fort McClellan Site Manager
U.S. Army Transition Force
681 Castle Avenue
Anniston, Alabama 36205

Refuge Manager
Mountain Longleaf National Wildlife Refuge
407 Baby Bains Gap Road
Anniston, Alabama 36205

Chief, Land Division
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110-2059

## 8.0 Administrative Record

Pertinent LUC records and other documents in the Administrative Record for the former BGR Ranges can be found at the information repository maintained at the following location:

**McClellan Center Library**
100A Gamecock Drive (Room 1153)
Anniston, Alabama 36205
Telephone: (256) 238-9352

## 9.0 References

ADEM, 2017, ***Alabama Risk-Based Corrective Action Guidance Manual***, Alabama Department of Environmental Management, Revision 3.0, February.

Army, 2000, ***Memorandum of Agreement Among U.S. Environmental Protection Agency, Alabama Department of Environmental Management, U.S. Department of the Army Fort McClellan, and Anniston-Calhoun County Fort McClellan Development Joint Powers Authority***, 12 December 2000.

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Shaw Environmental, Inc. (Shaw), 2014, ***Record of Decision, Bains Gap Road Ranges, Fort McClellan, Calhoun County, Alabama***, Final, April.

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# FIGURES

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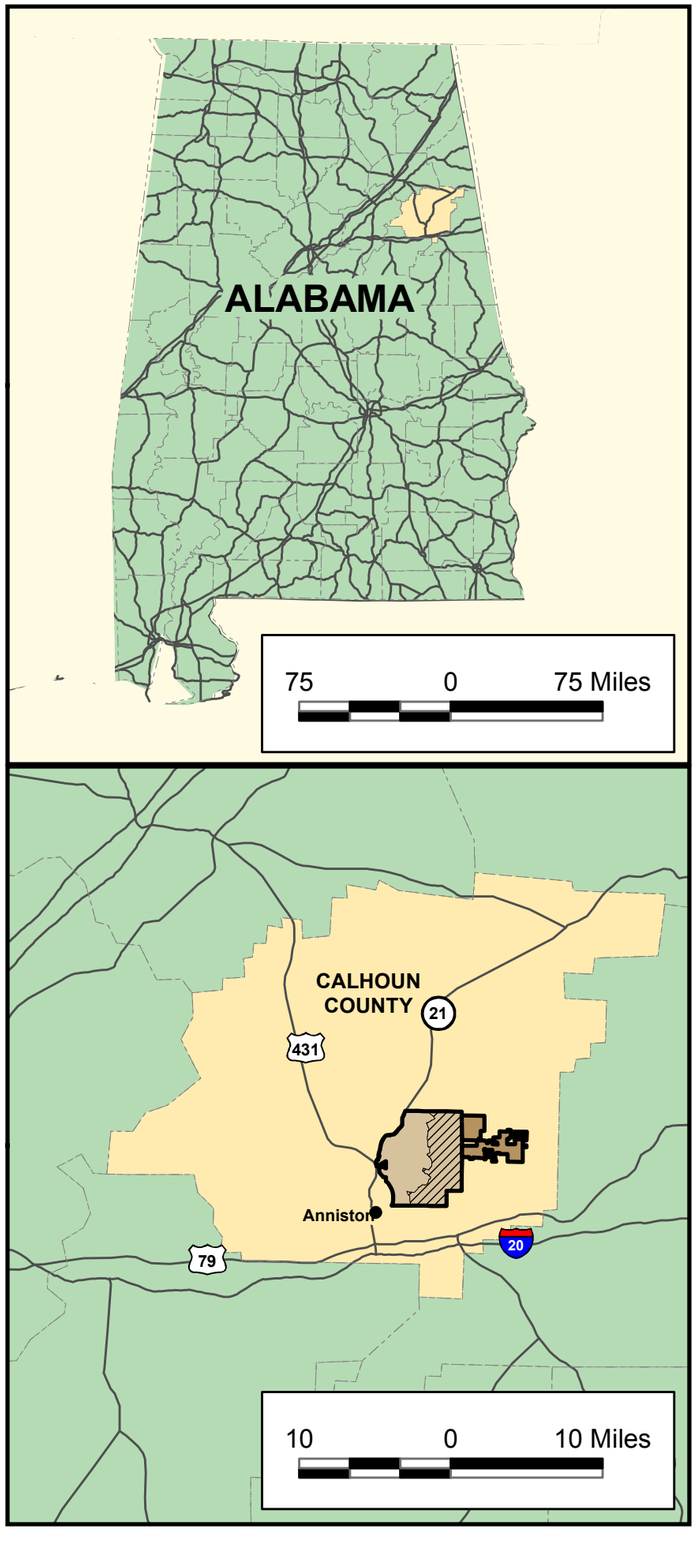
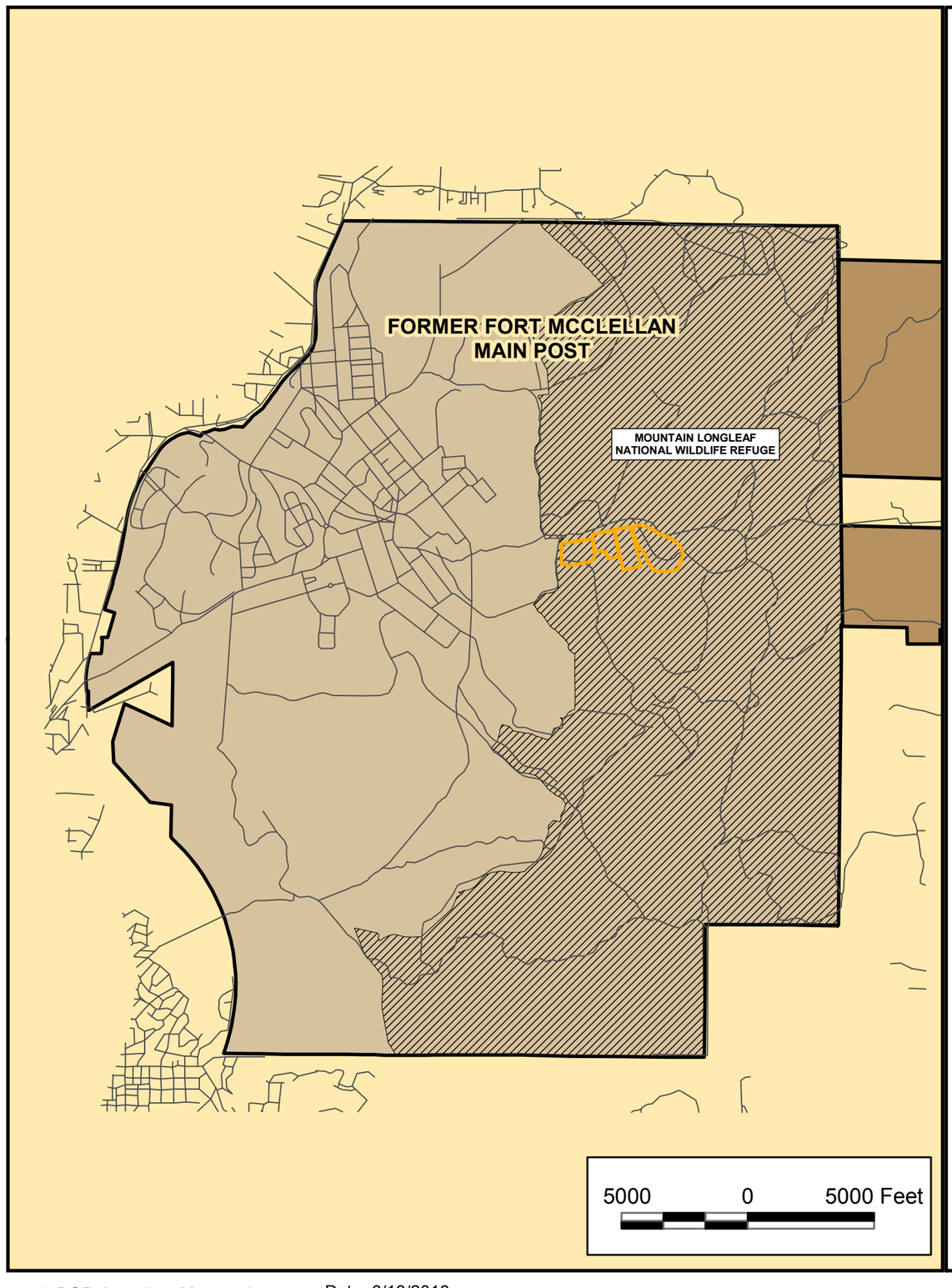
# Figure 1

## Site Location Map

Bains Gap Road Ranges
Fort McClellan
Calhoun County, Alabama




Parcel Boundary

U.S. Fish and Wildlife Service (USFWS) Property Boundary

Former Choccolocco Corridor

Former Fort McClellan Main Post

County Boundary

Road

N

APTIM

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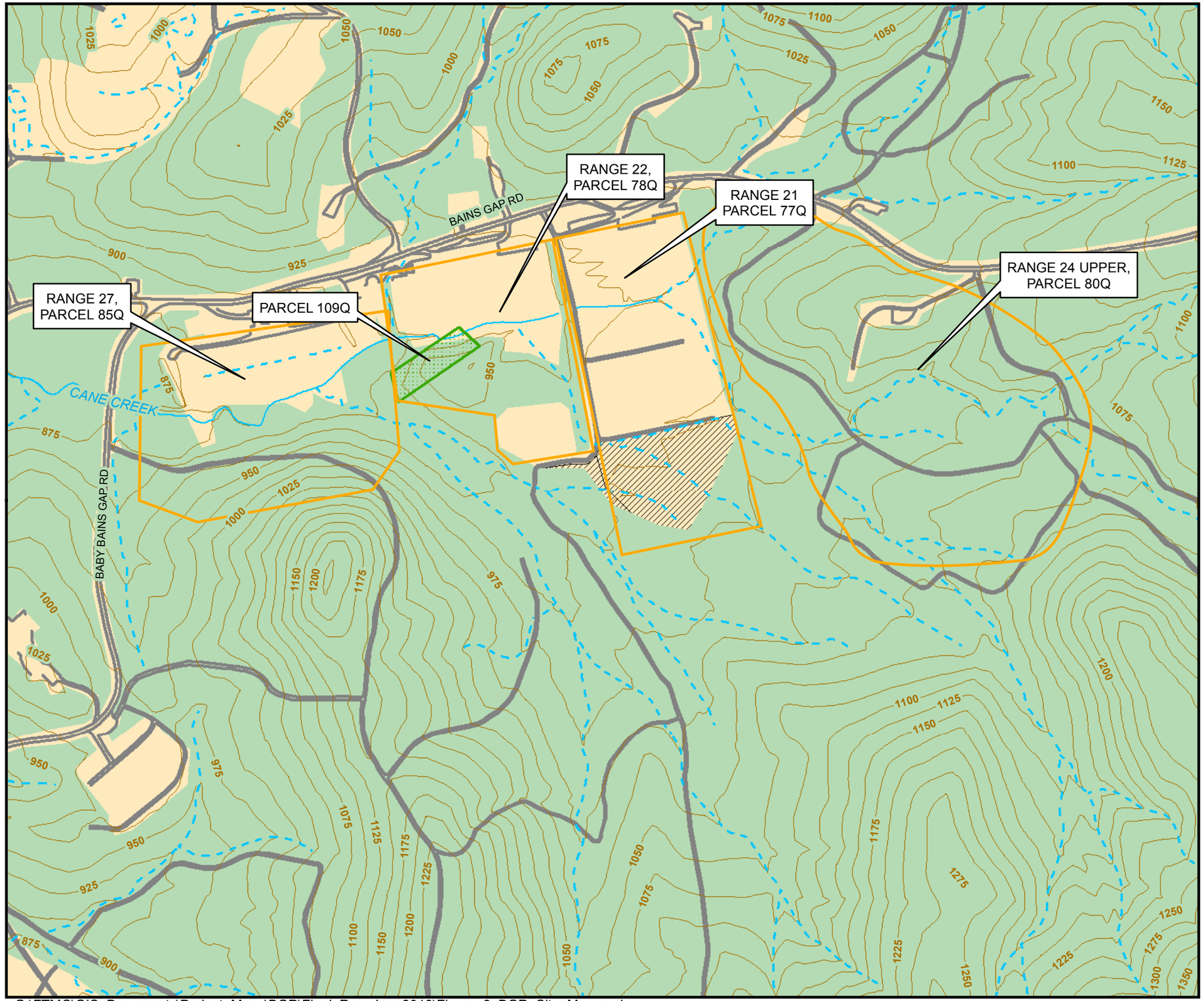
# Figure 2

## Site Map

Bains Gap Road Ranges
Fort McClellan
Calhoun County, Alabama




- Parcel Boundary
- Former Mortar Range (Firing Line), Parcel 109(Q)
- Surface Drainage Feature (dashed where intermittent)
- Topographic Contour (25-foot interval)
- Road
- Fish and Wildlife Service Environmentally Sensitive Area (No Soil/Sediment Remediation)
- Vegetated Area
- Clear Area

500 0 500 Feet

NAD83 State Plane Coordinates

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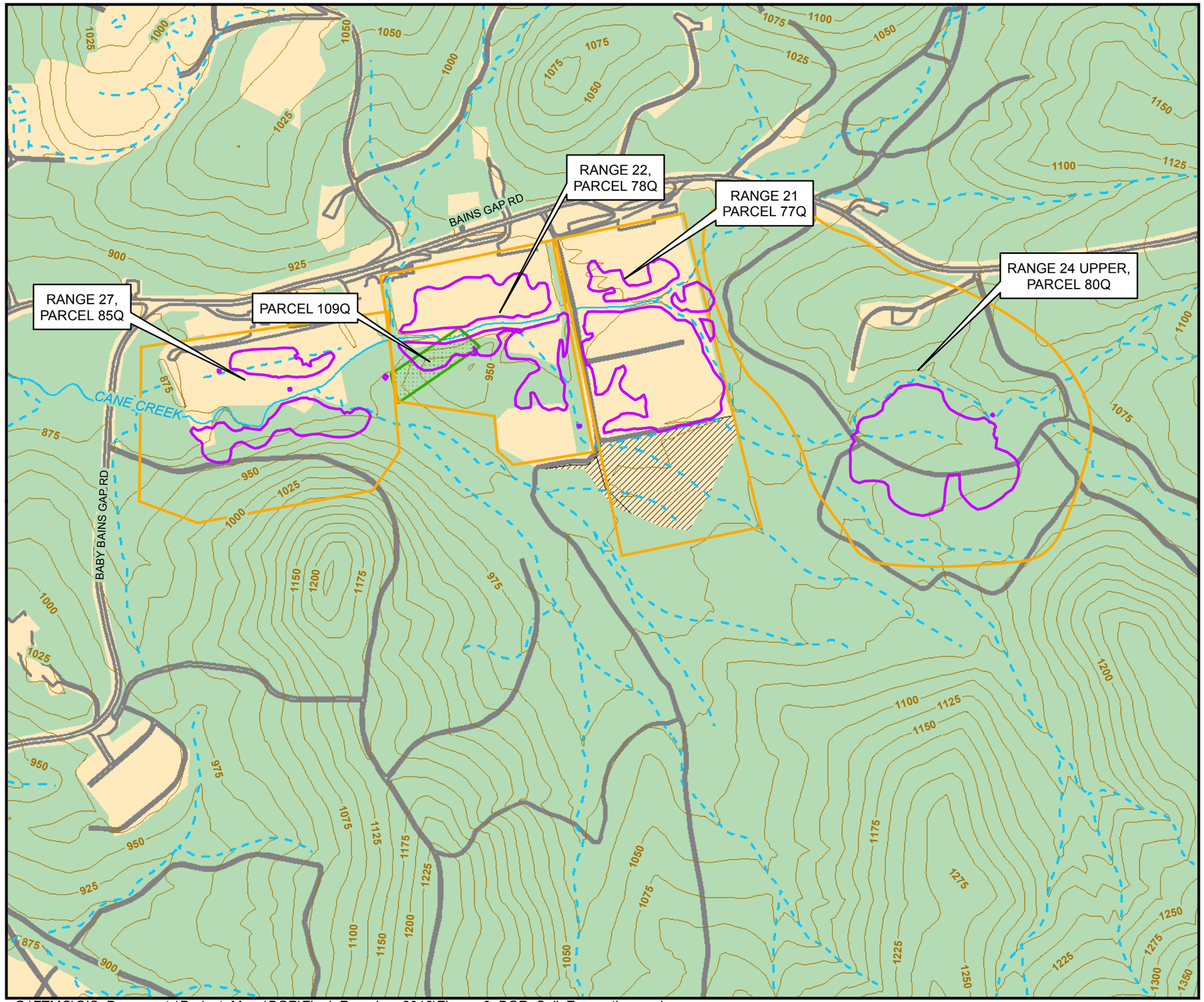
Date: 6/13/2018




# Figure 3

## Areal Extent of Soil Excavation

Bains Gap Road Ranges
Fort McClellan
Calhoun County, Alabama

Note:
All sediment removed to levels below the residential cleanup value for lead and copper.

- Surveyed Excavation Boundary
- Parcel Boundary
- Former Mortar Range (Firing Line), Parcel 109(Q)
- Surface Drainage Feature (dashed where intermittent)
- Topographic Contour (25-foot interval)
- Road
- Fish and Wildlife Service Environmentally Sensitive Area (No Soil/Sediment Remediation)
- Vegetated Area
- Clear Area

500 0 500 Feet

NAD83 State Plane Coordinates

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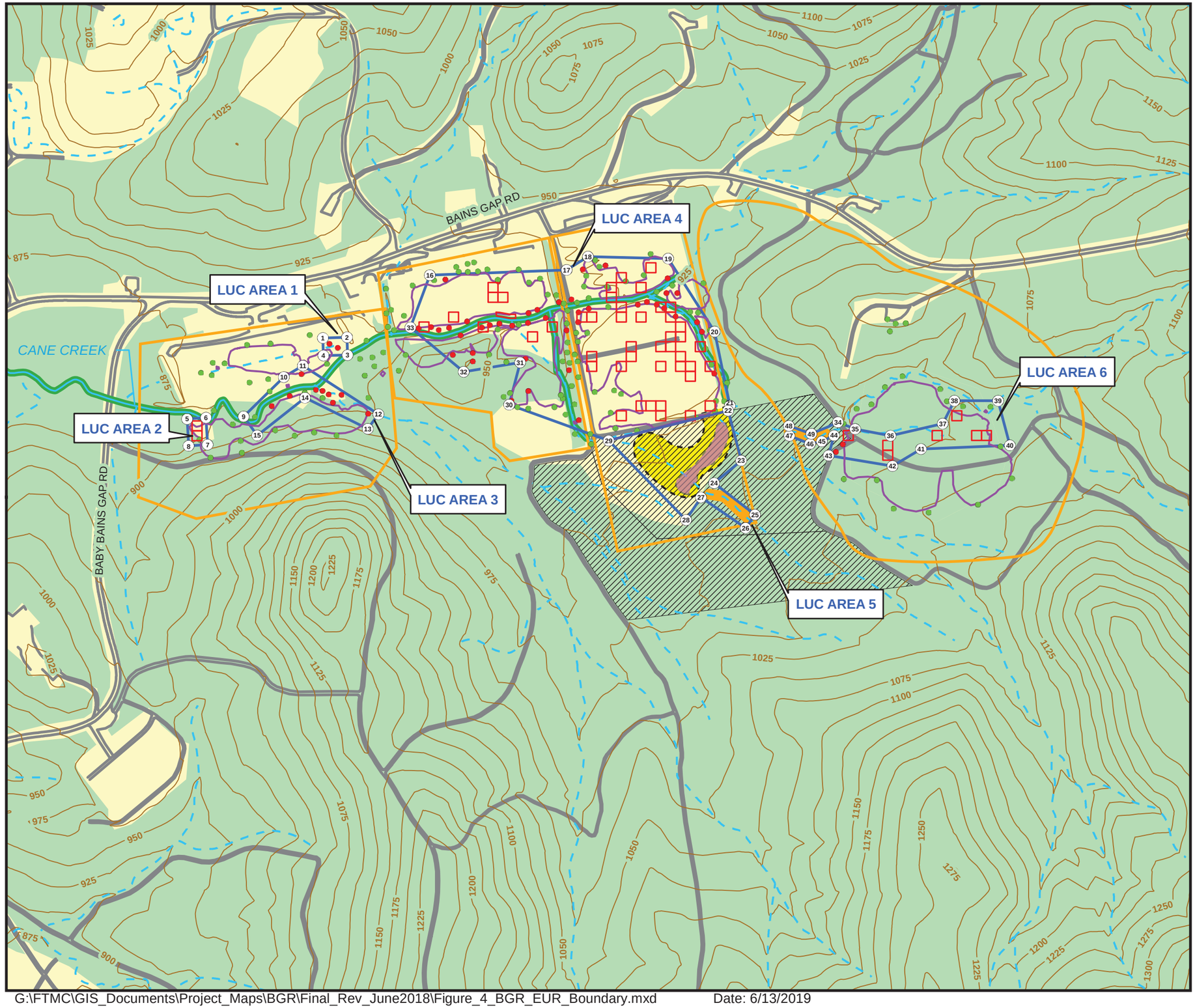
Date: 6/13/2018

# Figure 4
## Land Use Control Boundary

Bains Gap Road Ranges
Fort McClellan
Calhoun County, Alabama




2015 XRF Location with Lead Results (for Areas Outside the Excavation Boundary)

- <= 400 mg/kg
- > 400 mg/kg but < 500 mg/kg
- Land Use Control Boundary Corner Point
- Sampling Grid with Final Lead Results (subsurface) above 400 mg/kg
- Surveyed Excavation Boundary
- Land Use Control Boundary (35.2 acres)
- Parcel Boundary
- Surface Drainage Feature (dashed where intermittent)
- Areas Where Sediment Removed to Levels Below the Residential Cleanup Value for Lead (400 mg/kg) and Copper (3,100 mg/kg).
- Estimated Extent of Lead-Contaminated Sediment Exceeding 400 mg/kg
- Topographic Contour (25-foot interval)
- Road
- Fish and Wildlife Service Environmentally Sensitive Area (Area Not Remediated at Direction of USFWS)
- Estimated Extent of Lead-Contaminated Soil Above 400 mg/kg within USFWS Service Environmentally Sensitive Area
- Estimated Extent of Lead-Contaminated Soil Above 800 mg/kg within USFWS Service Environmentally Sensitive Area
- Vegetated Area
- Clear Area

500 0 500 Feet

NAD83 State Plane Coordinates

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**DEPARTMENT OF THE ARMY**
OFFICE OF THE ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
600 ARMY PENTAGON
WASHINGTON DC 20310-2400

REPLY TO
ATTENTION OF

June 24, 2019

Base Realignment and Closure Division

Mrs. Brandi Little
Alabama Department of Environmental Management (ADEM)
Engineering Services Section
Governmental Hazardous Waste, Land Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

Dear Mrs. Little:

Please find the attached *Final Land Use Control Implementation Plan for Bains Gap Road Ranges,* Revised June 2019, for your review. Please submit your comments or concurrence within 30 days from the date of receipt of this letter.

Copies of this correspondence were provided to Ms. Melissa Shirley, U.S. Army Corps of Engineers, and Keith Westlake, US Fish and Wildlife Service.

If you have questions regarding this submittal or require additional information, please contact me at 404-469-3399 or by email at owen.m.nuttall.civ@mail.mil.

Sincerely,

Owen Nuttall
Site Manager

Attachment

**LANCE R. LEFLEUR**
DIRECTOR

**KAY IVEY**
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov

1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

August 5, 2019

Mr. Owen Nuttall
Site Manager
US Army Transition
681 Castle Avenue
Anniston, Alabama 36205

**RE: ADEM Review and Evaluation:** Responses to Comments and *Final Land Use Control Implementation Plan for Bains Gap Road Ranges;* dated June 24, 2019
Fort McClellan, Calhoun County, Alabama
Facility I.D. No. AL5 000 053 611

Dear Mr. Nuttall:

The Alabama Department of Environmental Management (ADEM or the Department) has reviewed the Army's *Responses to Comments* and *Final Land Use Control Implementation Plan* (LUCIP) *for Bains Gap Road Ranges*. Based upon this review, ADEM has determined that all comments on the LUCIP have been resolved. However, as previously stated in a letter dated May 29, 2019, ADEM cannot concur with the *Final LUCIP* until a Notice of Environmental Use Restriction (NEUR) has been submitted for review and approval. Please submit a NEUR for the Bains Gap Road Ranges site.

If you have any questions or concerns regarding this matter, please contact Ms. Kaneshia Townsend at 334-394-4356 or via email at ktownsend@adem.alabama.gov.

Sincerely,

Jason Wilson, Chief
Governmental Hazardous Waste Branch
Land Division

JJW/ATM/KLT/tlp

cc: Ms. Melissa Shirley/USACE, Mobile District
Ms. Leigh Lattimore/EPA Region 4
Mrs. Ashley Mastin/ADEM
Ms. Lisa Holstein/Army
Mrs. Brandi Little/ADEM

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# Response to Comments
## Land Use Control Implementation Plan for Bains Gap Road Ranges, Final (April 2019)
## Environmental Remediation Services at Four Sites, Fort McClellan, Anniston, Alabama

| Comment # | Reviewer | Page | Paragraph/ Section | Comment | Response |
|---|---|---|---|---|---|
| 1. | ADEM (letter) | NA | 4.0 | Please revise Section 4.0 to include a commercial/ industrial as well as residential land use restriction for the portions of the Fish and Wildlife Service Environmentally Sensitive Area with lead exceedances above 800 milligram per kilogram. | The previous RI identified an area in the US Fish and Wildlife Environmentally Sensitive Area within the residential lead exceedance area where lead concentrations exceeded the commercial cleanup level of 800 mg/kg. To reflect the requirement for a commercial land use restriction, revisions were made to Section 4.1 to describe the LUC, and to Section 4.3 and Figure 4 of the LUCIP to separate the Environmentally Sensitive Area into its own LUC Area, which will have both commercial and residential LUCs. The legal descriptions and LUC Area numbers were updated accordingly in Section 4.3 and Figure 4. |
| 2. | ADEM (email) | | 4.0 | Please ensure that all areas of the environmentally sensitive area where other constituents (e.g. antimony, copper, and zinc) exceed their respective residential and/or commercial/industrial screening level have the proper land use restrictions in place and revise Section 4.0 of the LUCIP accordingly, if necessary | There were no constituents other than lead identified above residential or commercial/industrial screening levels identified by the RI. No change to Section 4.0 required. |