

**FINAL
OPERATIONAL RANGE ASSESSMENT PROGRAM
PHASE I QUALITATIVE ASSESSMENT REPORT
CAMP SHELBY TRAINING CENTER
CAMP SHELBY, MISSISSIPPI**

FEBRUARY 2009

Prepared for:

UNITED STATES ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT
P.O. Box 1715
Baltimore, Maryland 21203

and

UNITED STATES ARMY ENVIRONMENTAL COMMAND
Aberdeen Proving Ground, Maryland 21010

Prepared by:

MALCOLM PIRNIE, INC.
701 Town Center Drive
Suite 600
Newport News, Virginia 23606



EXECUTIVE SUMMARY

The United States (U.S.) Army is conducting qualitative assessments at operational ranges to meet the requirements of Department of Defense policy and to support the U.S. Army Sustainable Range Program. The operational range qualitative assessment (hereinafter referred to as Phase I Assessment) is the first phase of the U.S. Army Operational Range Assessment Program. This Phase I Assessment evaluates the operational range area at Camp Shelby Training Center to assess whether further investigation is needed to determine if potential munitions constituents of concern (MCOC) are or could be migrating off-range at levels that may pose an unacceptable risk to human health or the environment. In conducting the Phase I Assessment, MCOC sources, potential off-range migration pathways, and potential off-range human and ecological receptors are evaluated as appropriate.

The Camp Shelby Training Center occupies approximately 134,000 acres in southeastern Mississippi, about 10 miles south of Hattiesburg and approximately 90 miles south of Jackson. Portions of Camp Shelby Training Center are located in Forrest, George, and Perry counties.

The Mississippi Army National Guard has responsibilities to the federal government and the State of Mississippi. The federal missions are to support and defend the Constitution of the United States by the deterrence of war and, if deterrence fails, by prompt mobilization of forces for war and to be prepared for response to federal emergencies. The state mission is to provide trained and disciplined forces for domestic emergencies or as otherwise required by state law (MSARNG, 2001).

As part of the Operational Range Inventory Sustainment, an update to the Army Range Inventory Database-Geodatabase (ARID-GEO) was completed in 2005. The ARID-GEO (2005) identified 238 operational range areas encompassing 140,359.44 acres. In ARID-GEO (2005), several of the ranges overlap; hence, the sum of range areas is greater than the total operational range area. A total of 4,697 acres was identified as other than operational acreage. Training activities conducted at Camp Shelby Training Center primarily include troop bivouacking, wheeled vehicle maneuvers, artillery firing exercises, and tank training maneuvers by M1 tanks and Bradley fighting vehicles (MSARNG, 2001).

Potential MCOC sources identified at Camp Shelby Training Center primarily consist of non-dudded and dudded impact areas, live-fire ranges, training and maneuver areas, demolition ranges, personnel/equipment drop zones, and a runway. In general, MCOC from primary source areas potentially impact the following source media: (1) soil (e.g., impact berms, impact areas surrounding targets, burn pits) and (2) surface water / sediment (e.g., direct deposition into streams and wetlands).

MCOC can be released to groundwater (down gradient), surface water / sediment (downstream), off-range soil, or the food chain via a variety of release mechanisms. Release mechanisms for soil may include leaching from soil to groundwater or erosion and runoff to off-range surface soil or to nearby streams. Once potential MCOC are deposited in surface water / sediment, they have the potential to migrate downstream, recharge the shallow groundwater, or be taken up by aquatic plants or animals. Release mechanisms for surface water / sediment are natural streamflow and sediment transport.

Surface water drainage at Camp Shelby Training Center is to the west and south into Black Creek and the Pascagoula River and to the north into the Leaf River, which in turn also drains into the Pascagoula River.

The main human receptors are residents consuming water from wells down gradient, and recreational

users of these waterways, all of which are designated as recreational waterways according to the Mississippi Department of Wildlife, Fisheries and Parks (2008). The main ecological receptors are the red cockaded woodpecker, the gopher tortoise, and the gulf sturgeon critical habitat in the Leaf River and Pascagoula River downstream of the installation (MSARNG, 2007). Black Creek is also considered a sensitive environment due to its designation as a scenic river (MSDWWF, 2008).

The 238 operational ranges at Camp Shelby Training Center are categorized as Unlikely. No operational ranges have been categorized as Inconclusive or Referred.

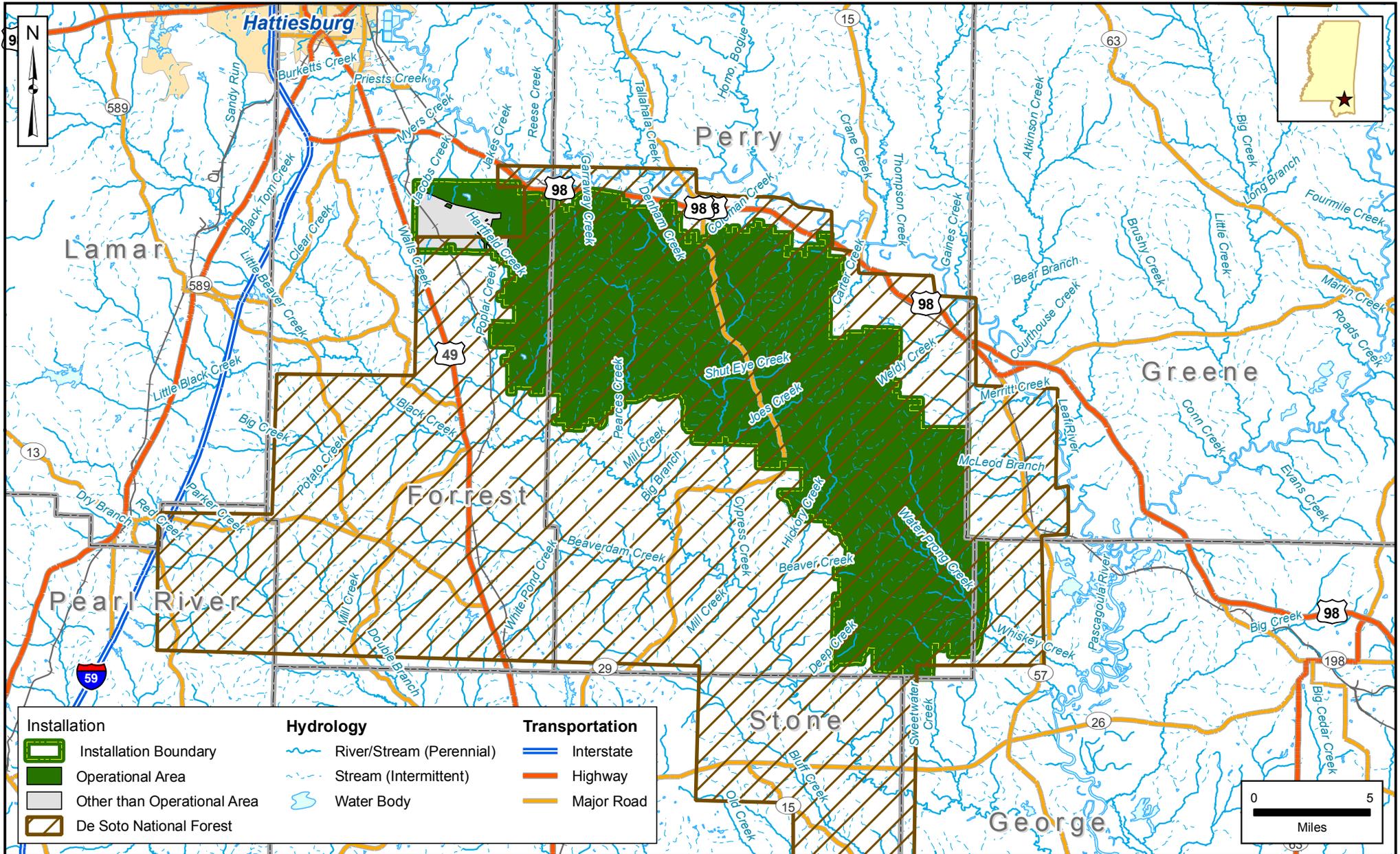
Unlikely – Five-Year Review

Two hundred and thirty-eight ranges at Camp Shelby Training Center are categorized as Unlikely, totaling 140,359.44 acres. These ranges consist of non-dudded and dudded impact areas, live-fire ranges, training and maneuver areas, demolition ranges, drop zones, and a runway. Ranges where, based upon a review of readily available information, there is sufficient evidence to show that there are no known releases or source-receptor interactions off-range that could present an unacceptable risk to human health or the environment are categorized as Unlikely. Ranges categorized as Unlikely are required to be re-evaluated at least every five years. Re-evaluation may occur sooner if significant changes (e.g., change in range operations or site conditions, regulatory changes) occur that affect determinations made during this Phase I Assessment.

Table ES-1 summarizes the Phase I Assessment findings.

Table ES-1: Summary of Findings and Conclusions for Camp Shelby

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	48 operational ranges; 85,336.60 acres	No source—limited or no military munitions use	Not evaluated (no source identified)			Re-evaluate during the five-year review. No source was identified.
	106 operational ranges; 2,418.35 acres	Firing points, impact areas, and demolition ranges	Black Creek, Leaf River, Pascagoula River, their tributaries, and the Citronelle aquifer	Recreational users of Black Creek, the Leaf River, and the Pascagoula River	Wetlands, the sensitive habitat of Black Creek, and threatened and endangered species downstream in the Leaf River and Pascagoula River	Re-evaluate during the five-year review. Sampling indicates that MCOCs are not migrating off-range in concentrations that pose an unacceptable risk to off-range human or ecological receptors.
	84 operational ranges; 52,604.49 acres			Recreational users of Black Creek, the Leaf River, and the Pascagoula River and residents consuming water from wells down gradient	Wetlands, the sensitive habitat of Black Creek, and threatened and endangered species downstream in the Leaf River and Pascagoula River and down gradient of the installation	



Operational Range Assessment Program
Phase I Qualitative Assessment
Camp Shelby Training Center, MS
Figure 1-1
General Camp Shelby Training Center Location

Data Sources:
 AEC, ARID-GEO, 2005
 ESRI, StreetMap USA, 2005

 Date: February 2009
 Prepared By: Malcolm Pirnie, Inc.
 Prepared For: U.S. Army
 Contract: W912DR-05-D-0004

