

**FINAL  
OPERATIONAL RANGE ASSESSMENT PROGRAM  
PHASE I QUALITATIVE ASSESSMENT REPORT  
EASTERN KENTUCKY TRAINING SITE, HIDDEN VALLEY  
POWELL COUNTY, KENTUCKY**

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Prepared for:

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## ABBREVIATIONS/ACRONYMS

amsl	Above Mean Sea Level
ARID-GEO	Army Range Inventory Database-Geodatabase
bgs	Below Ground Surface
CSM	Conceptual Site Model
DoD	Department of Defense
DODI	Department of Defense Instruction
E	Ecological receptors identified. (This refers to range grouping; pathway designation always precedes E designation.)
gpd	Gallons per Day
GW	Groundwater pathway identified. (This refers to range grouping; M designation always precedes GW designation.)
H	Human receptors identified. (This refers to range grouping; pathway designation always precedes H designation.)
HUC	hydrologic unit code
KDFWR	Kentucky Department of Fish and Wildlife Resources
KGS	Kentucky Geological Survey
KYARNG	Kentucky Army National Guard
LS	Limited Source
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
MCOC	Munitions Constituents of Concern
mg/kg	Milligrams per Kilogram
MOU	Memorandum of Understanding
MTA	Military Training Area
NCOIC	Training Non-Commissioned Officer in Charge
NG	Nitroglycerin
ORAP	Operational Range Assessment Program
PRIDE	Planning Resource for Infrastructure Development and Evaluation
PU	Pathway unlikely or incomplete. (This refers to range grouping; M designation always precedes PU designation.)
ROTC	Reserve Officers' Training Corps
SERCC	Southeast Regional Climate Center
SW	Surface water pathway identified. (This refers to range grouping; M designation always precedes SW designation.)
U.S.	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Command
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
°F	Fahrenheit

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## **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 Eastern Kentucky Training Site, Hidden Valley 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.

Eastern Kentucky Training Site, Hidden Valley, a Kentucky Army National Guard (KYARNG) site occupying 534.54 acres in eastern Kentucky within Powell County, is located approximately one mile southwest of the town of Westbend and approximately four miles northwest of Clay City. The missions of Eastern Kentucky Training Site, Hidden Valley are to provide a training site to prepare units of the KYARNG for transition to war, national emergency, or as otherwise needed by the federal government and to assist local law enforcement and emergency management agencies at the direction of the governor.

As part of the Operational Range Inventory Sustainment, an update to the Army Range Inventory Database-Geodatabase (ARID-GEO) was submitted to the U.S. Army Environmental Command in March 2006. The ARID-GEO (2006) identified one range covering the 534.54 acres. Eastern Kentucky Training Site, Hidden Valley does not contain any acreage classified as other than operational. Training activities conducted at Eastern Kentucky Training Site, Hidden Valley include maneuver and training, light forces training (e.g., dismounted and limited mounted tactical maneuvers, squad and platoon battle drills, engineer equipment training), and land navigation training (R&K Engineering, 2007).

Limited potential MCOC sources were identified during the Phase I Assessment for the operational range at Eastern Kentucky Training Site, Hidden Valley. Live firing at Eastern Kentucky Training Site, Hidden Valley was infrequent and limited to small arms ammunition at a historical small arms rifle range from 1986 to 2002. The rifle range was closed and potential source areas of MCOC were excavated in 2003 (JL Lee Engineering, 2003). Nitroglycerin (NG) is not likely to be found in soil along the firing line due to its rapid degradation. According to the Eastern Kentucky Training Site, Hidden Valley Training Non-Commissioned Officer in Charge (NCOIC), obscurants may have been used infrequently at the site; however, Training Site Utilization Reports for the last five years do not indicate their use. Any use of obscurants at the installation was likely infrequent and dispersed, resulting in no concentrated source of MCOC. Because limited potential sources of MCOC were identified, source media, release mechanisms, exposure media, exposure routes, and receptors were not evaluated.

The one operational range at Eastern Kentucky Training Site, Hidden Valley is categorized as Unlikely.

**Unlikely – Five-Year Review**

The single range at Eastern Kentucky Training Site, Hidden Valley is categorized as Unlikely, totaling 534.54 acres<sup>1</sup>. According to ARID-GEO (2006), this range is identified as “Other – maneuver / training area, light forces.” 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.

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<sup>1</sup> According to ARID-GEO (2006), Real Property reports the size of the range as 540 acres.

**Table ES-1: Summary of Findings and Conclusions for Eastern Kentucky Training Site, Hidden Valley**

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	One operational range; 534.54 acres	Limited source—limited military munitions use	Not evaluated (limited source)			Re-evaluate during the five-year review. Historical source was removed.