



FINAL

Operational Range Assessment Program  
Phase I Qualitative Assessment Report  
Keamuku Local Training Area, Hawai'i, Hawai'i  
U.S. Army Operational Range Assessment Program  
Qualitative Operational Range Assessments

Prepared for:  
U.S. Army Environmental Command and  
U.S. Army Corps of Engineers Baltimore District



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Final Operational Range Assessment Program Phase I Qualitative Assessment Range Assessment Reports will be released beginning in March 2008 per the Direction of Army Headquarters. The cover page of this Report reflects the official finalization date. The date on subsequent pages/figures reflects the date upon which this document's conclusions are based.



## ABBREVIATIONS/ACRONYMS

ARID-GEO	Army Range Inventory Database-Geodatabase
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DNT	Dinitrotoluene
DoD	Department of Defense
DODI	Department of Defense Instruction
E	Ecological receptors identified. (This refers to range grouping; pathway designation always precedes E designation.)
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.)
HIARNG	Hawaii Army National Guard
HMX	Cyclotetramethylenetetranitramine
LS	Limited Source
LTA	Local Training Area
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
MCOOC	Munitions Constituents of Concern
MEC	Munitions and Explosives of Concern
NGB	National Guard Bureau
OE	Ordnance and Explosives
ORAP	Operational Range Assessment Program
PU	Pathway unlikely or incomplete. (This refers to range grouping; M designation always precedes PU designation.)
RDX	Cyclotrimethylenetrinitramine
SW	Surface water pathway identified. (This refers to range grouping; M designation always precedes SW designation.)
TNT	Trinitrotoluene
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

## 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 (ORAP). This Phase I Assessment evaluates the operational range area at Keamuku Local Training Area (LTA) 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.

Keamuku LTA is located adjacent to and southeast of Waikoloa Village on the island of Hawai'i. The training area is bordered by Pu'u Pa Local Training Area to the north and Pohakuloa Training Area to the south. The primary mission of Keamuku LTA is to serve as a maneuver training area for the U.S. Army Pacific Command.

Between 1943 and 1946 the land on which Keamuku LTA sits was part of a Navy training area referred to as the Waikoloa Maneuver Area. The historical Waikoloa Maneuver Area was used for a variety of live-fire training activities, but a visual reconnaissance and geophysical study of the Keamuku parcel found no munitions and explosives of concern (MEC). Today, Keamuku LTA is composed of one operational range encompassing 22,639.7 acres. The training area is utilized four to six times a year for light forces and maneuver training.

The one operational range at Keamuku LTA is categorized as Unlikely.

### **Unlikely – Five-Year Review**

One range at Keamuku LTA is categorized as Unlikely, totaling 22,639.7 acres. This range consists of a maneuver training area. 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 Keamuku Local Training Area**

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	One operational range; 22,639.7 acres	Limited source – Limited historical munitions associated with the Waikoloa Maneuver Area may have been used on range		Not Evaluated (Limited Source)		Re-evaluate during the five-year review. No source-receptor interaction or complete exposure pathways were identified. See Section 5.1.3.