



FINAL

Operational Range Assessment Program
Phase I Qualitative Assessment Report
Dillingham Military Reservation, 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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March 2008

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 Geodatabase
ARNG	Army National Guard
BSA	Biologically Significant Area
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DNT	Dinitrotoluene
DMR	Dillingham Military Reservation
DoD	Department of Defense
DODD	Department of Defense Directive
DODI	Department of Defense Instruction
DoE	Department of Energy
DPTMS	Directorate of Plans, Training, Mobilization and Security
EIS	Environmental Impact Statement
ERIS	Environmental Restoration Information System
°F	Fahrenheit
FARP	Forward Arming and Refueling Point
ft	Foot or Feet
GIS	Geographic Information System
H/E	Human/Ecological
HINHP	Hawai'i Natural Heritage Program
HMX	Cyclotetramethylenetetranitramine
INRMP	Integrated Natural Resource Management Plan
IWFMP	Integrated Wildland Fire Management Plan
ITAM	Integrated Training Area Management
LS	Limited or No Source Munition
MCOC	Munitions Constituents of Concern
MGW	Munitions/Groundwater Migration Pathway
mm	Millimeter
MPU	Migration Pathway Unlikely
MSW	Munitions/Surface Water Migration Pathway
MSWGW	Munitions/Surface Water and Groundwater Migration Pathway
ORAP	Operational Range Assessment Program
PETN	Pentaerythritoltetranitrate
RDX	Cyclotrimethylenetrinitramine
RFMSS	Range Facility Management Support System
TIC	Technical Information Center
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 Center
USARHAW	25 th Infantry Division (Light) [ID(L)] and U.S. Army, Hawai'i
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
WPRFMC	Western Pacific Regional Fishery Management Council

EXECUTIVE SUMMARY

PURPOSE

This qualitative assessment, hereinafter referred to as Phase I Assessment, evaluates Dillingham Military Reservation's (DMR) operational range area 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. The Phase I Assessment results in the categorization of operational ranges as appropriate, as follows:

- **Referred – Refer to Appropriate Cleanup Program:** Ranges with compelling evidence (e.g., sampling data) to indicate the presence of an off-range release that potentially poses an unacceptable risk to human health or the environment;
- **Inconclusive – Phase II Quantitative Assessment Required:** Ranges where existing information either is insufficient to make a source-receptor interaction determination or indicates the potential for such interaction to be occurring; or
- **Unlikely – Five-Year Review¹:** 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 that could present an unacceptable risk to human health or the environment based on a review of the information available.

SUMMARY OF FINDINGS

To facilitate the qualitative analysis, MCOC sources, potential migration pathways from a range, and potential off-range human and/or ecological receptors associated with the ranges at DMR were evaluated. Each range was then placed into one of several descriptive groups that meet the criteria for the Unlikely category.

The four operational ranges at DMR that were included in the qualitative assessment have been placed into the following category:

- **Unlikely** – A total of four ranges consisting of maneuver training areas and a fixed wing airstrip totaling 599.64 acres.

These findings are summarized in **Table ES-1**.

¹ All operational ranges must be periodically re-evaluated to determine if there is a release or substantial threat of release of MCOC from an operational range to an off-range area. Range groups categorized as Unlikely are to be re-evaluated at least every five years. Re-evaluation may occur sooner if significant changes (e.g., changes in range operations, site conditions, and regulatory changes) occur that affect determinations made during the Phase I Assessment.

Table ES-1: Summary of Findings, Conclusions, and Recommendations for Dillingham Military Reservation

Category	Group Identification	Total Number of Ranges and Acreage	Source(s)	Pathway(s)*	Human Receptors*	Ecological Receptors*	Recommendations (Future Steps)
Unlikely	Limited Source	Four operational ranges; 599.64 acres	Limited source – limited or no military munitions use	No further evaluation required	No further evaluation required	No further evaluation required	Re-evaluate during the five-year review
* Indicates the specific pathways of concern.							



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**Qualitative Operational Range Phase I Assessment
Dillingham Military Reservation, HI**

Figure 1-1
Installation Location



Data Sources:
ARID-GEO 24 Sept. 2001
ESRI StreetMap USA, 2005

Date: October, 2006
Prepared By: EA Engineering, Science, and Technology
Prepared For: U.S. Army
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