



FINAL

Operational Range Assessment Program Phase I Qualitative Assessment Report Papago Park Military Reservation, Arizona 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



Printed on
recycled
paper



May 2008



ABBREVIATIONS/ACRONYMS

amsl	Above Mean Sea Level
ARID-GEO	Army Range Inventory Database-Geodatabase
AZARNG	Arizona Army National Guard
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DoD	Department of Defense
DODI	Department of Defense Instruction
DODIC	Department of Defense Identification Code
E	Ecological receptors identified. (This refers to range grouping; pathway designation always precedes E designation.)
ES	Engineering-Sciences, Inc.
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.)
IRP	Installation Restoration Program
LS	Limited Source
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
MCOC	Munitions Constituents of Concern
MMRP	Military Munitions Response Program
NG	Nitroglycerin
NGB	National Guard Bureau
ORAP	Operational Range Assessment Program
PU	Pathway unlikely or incomplete. (This refers to range grouping; M designation always precedes PU designation.)
RFMSS	Range Facility Management Support System
ROTC	Reserve Officers' Training Corps
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
WP	White Phosphorus
°F	Degrees Fahrenheit

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 Papago Park Military Reservation 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.

Papago Park Military Reservation is located within the metropolitan area of Phoenix, Arizona in the northeast portion of Maricopa County. The installation is bordered by 52nd Street on the western side, Oak Street on the northern side, and by Papago Park recreation area to the east and south. McDowell Road transects the installation from east to west.

Papago Park Military Reservation is composed of 419.95 acres which includes the headquarters and operational focal point of the Arizona Army National Guard (AZARNG), the 107th Air Control Squadron, and the Arizona Military Institute. The installation consists of an armory which houses the Joint Forces Headquarters for AZARNG, and several other administrative buildings. The installation also includes four operational ranges consisting of two small arms ranges, a land navigation course, and a rappel training site across 103.82 acres.

Despite the utilization of small caliber munitions at Papago Park Military Reservation, the migration of on-range MCOC to off-range receptors is unlikely. A pathway via surface water exists; however, there are no human and ecological receptors which interact with the pathway. Groundwater pathways are hindered by limited precipitation, underlying geology, and high evapotranspiration rates.

The four operational ranges at Papago Park Military Reservation are categorized as Unlikely.

Unlikely – Five-Year Review

Four ranges at Papago Park Military Reservation are categorized as Unlikely, totaling 103.82 acres. These ranges consist of two small arms ranges, a land navigation course, and a rappel 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 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, 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 Papago Park Military Reservation

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	Two operational ranges; 2.52 acres	Small caliber munitions	Surface water in the man-made drainage basin at the base of the small arms impact berm	None due to the limited use of the obstacle course and the limited amount of water in the wash	None due to the location of the wash, limited amount of water in the wash, and the location of ecological receptors	Re-evaluate during the five-year review. No receptors were identified.
	Two operational ranges; 101.30 acres	Limited source – limited military munitions use	Not evaluated (limited source was identified)			Re-evaluate during the five-year review. Limited source was identified.