



FINAL

Operational Range Assessment Program
Phase I Qualitative Assessment Report
U.S. Army Garrison Fort Sam Houston, Texas
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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May 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.



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 U.S. Army Garrison Fort Sam Houston (Fort Sam Houston) 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.

Fort Sam Houston occupies approximately 3,226.35 acres of land in San Antonio, Texas (Army Range Inventory Database-Geodatabase, 2005). Fort Sam Houston was established in 1876 and is currently the Army Medical Command's principal training facility. There are eight operational ranges at Fort Sam Houston which encompass 198.14 acres. These operational ranges include three parade/drill fields, two rotary wing landing pad surfaces, a fire-fighting and rescue training area, a confidence/obstacle course, and a maneuver training area for light forces. Categories of munitions used at Fort Sam Houston include small caliber ordnance, along with pyrotechnics and obscurants, and other weapons systems (i.e., practice hand grenades). Munitions use is limited to historical use of these munitions at four operational ranges.

Primarily, MCOC sources identified at Fort Sam Houston consist of multi-use maneuver training ranges and historical small arms ranges. In general, MCOC from primary source areas potentially impact soil. Although munitions were historically used on four operational ranges at Fort Sam Houston, the migration of on-range MCOC to off-range receptors is unlikely. Three of the operational ranges do not have any surface water or groundwater pathways present on-range. A small (2.58 acres) portion of the fourth range lies within the floodplain of Salado Creek; however, flooding only occurs approximately once every three or four years. Based on the absence of a predominant surface water or groundwater pathway in the floodplain area, MCOC transport off this range is unlikely.

The eight operational ranges at Fort Sam Houston are categorized as Unlikely.

Unlikely – Five-Year Review

Eight ranges at Fort Sam Houston are categorized as Unlikely, totaling 198.14 acres. These ranges consist of two rotary wing runways, one confidence/obstacle course, one maneuver training area, three parade/drill fields, and a fire-fighting and rescue 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 on ranges 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 Fort Sam Houston

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	Eight operational ranges; 198.14 acres	No source – limited or no military munitions use	Not evaluated (no source was identified)			Re-evaluate during the five-year review. No source was identified.
		Historic small arms firing range fan, and maneuver training area	None		Not evaluated (no pathway was identified)	Re-evaluate during the five-year review. No pathway was identified.

ABBREVIATIONS/ACRONYMS

ACSIM	Assistant Chief of Staff for Installation Management
ARID-GEO	Army Range Inventory Database-Geodatabase
ATC	Army Travel Camp
BAMC	Brooke Army Medical Center
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DoA	Department of the Army
DoD	Department of Defense
DODI	Department of Defense Instruction
E	Ecological receptors identified. (This refers to range grouping; pathway designation always precedes E designation.)
EEM	Engineering-Environmental Management, Inc.
ENR	Environmental and Natural Resources Office
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.)
HMX	Cyclotetramethylenetetranitramine
IRP	Installation Restoration Program
IT/OHM	IT Corporation / OHM Remediation Services Group
LS	Limited Source
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
MCOC	Munitions Constituents of Concern
MACTEC	MACTEC Engineering and Consulting, Inc.
mg/kg	Milligrams Per Kilogram
MMRP	Military Munitions Response Program
MRS	Munitions Response Site
NG	Nitroglycerin
NGB	National Guard Bureau
NOAA	National Oceanic and Atmospheric Administration
ORAP	Operational Range Assessment Program
PETN	Pentaerythritoltetranitrate
PU	Pathway unlikely or incomplete. (This refers to range grouping; M designation always precedes PU designation.)
RDX	Cyclotrimethylenetrinitramine
SARA	San Antonio River Authority
SW	Surface water pathway identified. (This refers to range grouping; M designation always precedes SW designation.)
TNT	Trinitrotoluene
TWDB	Texas Water Development Board
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

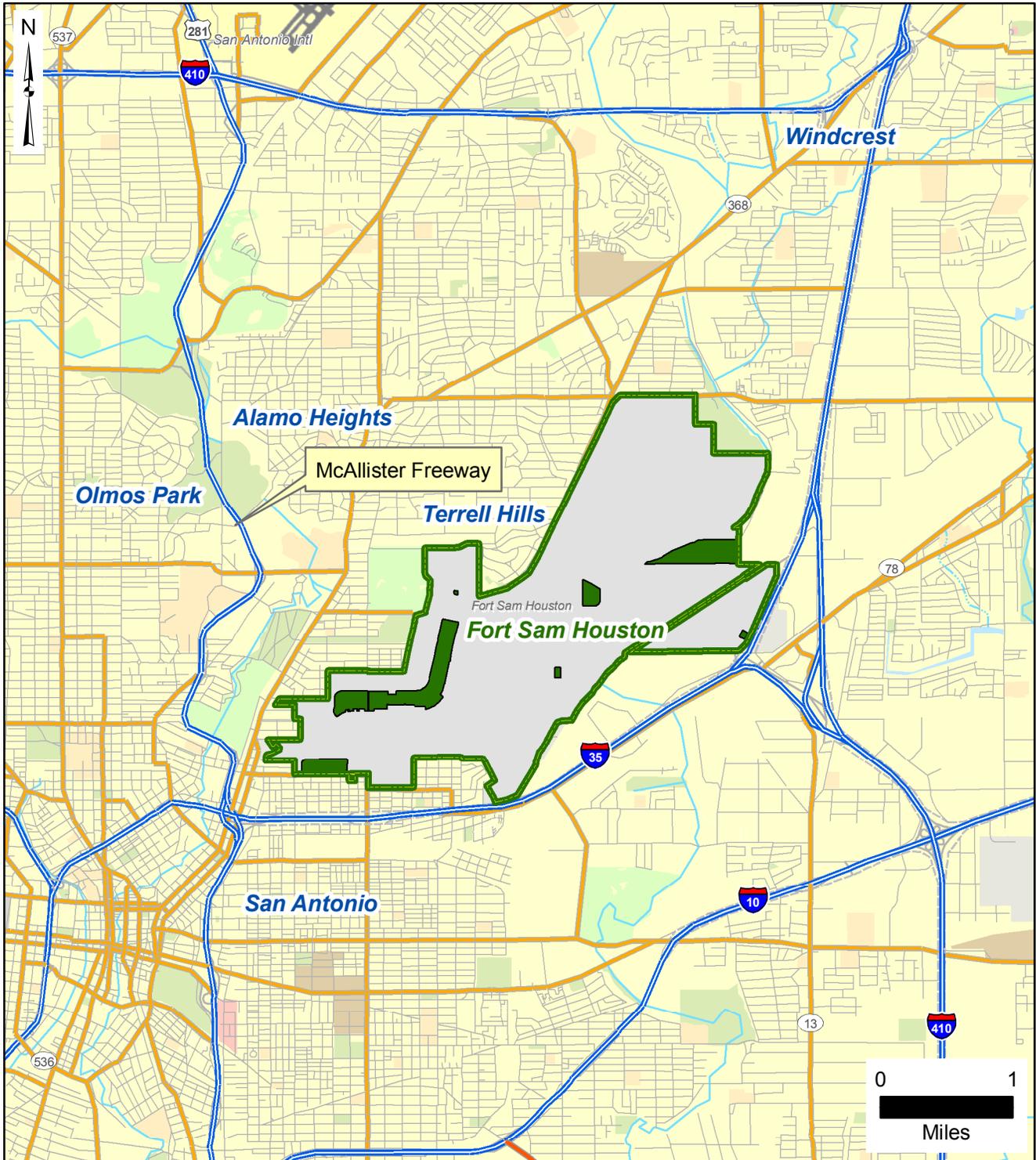
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WP	White Phosphorus
°F	Degrees Fahrenheit



**Operational Range Assessment Program
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**Figure 1-1
General Location of Fort Sam Houston**



Installation Data

- Installation Boundary
- Operational Range Area
- Non-Operational Area

Transportation

- Interstate Highway
- Highway
- Major Road

Hydrology

- Rivers/Streams
- Waterbody

Data Sources:
ARID-GEO, Dec.2006
ESRI, StreetMap, 2006

Date:.....November 2007
Prepared By:EA Engineering, Science, and Technology
Prepared For:.....U.S. Army
Contract Number:..... W912DR-05-D-0008