



FINAL

Operational Range Assessment Program Phase I Qualitative Assessment Report Gardiner Training Site, Maine

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



March 2008



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 Gardiner Training Site (TS) 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.

Gardiner TS is a 113.1-acre facility located in southwestern Maine, approximately two miles west of the city of Gardiner. Initial use of the site by the Maine Army National Guard (MEARNG) began in the early 1970s after the property was acquired from the Maine Department of Transportation. ARID-GEO (2007) identifies one 1.98-acre small arms firing range established in the early 1980s. Additionally, four maneuver and training areas totaling 110.18 acres are located at the site. A 0.94-acre non-operational area is located southeast of the firing range.

The primary source of MCOC identified at Gardiner TS is the impact berm associated with the small arms firing range. In general, MCOC from this source area potentially impact soil in the small arms range impact berm. However, periodic lead removal activities conducted at the firing range, an erosion control cover over the impact berm, and mitigating effects of on-range wetlands serve to limit the potential for MCOC migration at concentrations that may pose an unacceptable risk to human health or the environment.

The five operational ranges at Gardiner TS are categorized as Unlikely.

Unlikely – Five-Year Review

Five ranges at Gardiner TS are categorized as Unlikely, totaling 112.16 acres. These ranges consist of a small arms firing range and maneuver and training areas. Based upon a review of readily available information, ranges where 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 Gardiner Training Site

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	5 operational ranges; 112.16 acres	No source – limited or no military munitions use	Not evaluated (no MCOC source was identified)			Re-evaluate during the five-year review. No source was identified.
		Firing range	Tributaries to Cold Stream	Recreational users of Cobbosseecontee Stream, Pleasant Pond, and Kennebec River	Sensitive environments (i.e., wetlands, Atlantic salmon habitat, anadromous fisheries), and threatened and endangered species; tidewater mucklets (species of mussel) in Cobbosseecontee Stream	Regular maintenance of the impact berm and the characteristics of water bodies limit potential MCOC from impacting off-range receptors. Re-evaluate during the five-year review.

ABBREVIATIONS/ACRONYMS

ARID-GEO	Army Range Inventory Database-Geodatabase
BRAC	Base Realignment and Closure Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cfs	Cubic feet per second
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.)
F	Fahrenheit
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.)
ITAM	Integrated Training Area Management
LS	Limited Source.
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
MCOC	Munitions Constituents of Concern
MDIFW	Maine Department of Inland Fisheries and Wildlife
MEARNG	Maine Army National Guard
MEDEP	Maine Department of Environmental Protection
MEDMR	Maine Department of Marine Resources
MEDWP	Maine Department of Environmental Health and Human Services, Division of Environmental Health, Drinking Water Program
MGS	Maine Geological Survey
MEGIS	Maine Office of Geographic Information Systems
mph	Miles per hour
NGB	National Guard Bureau
NG	Nitroglycerin
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
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
SW	Surface water pathway identified. (This refers to range grouping; M designation always precedes SW designation.)
TS	Training Site
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
USDA	United State Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

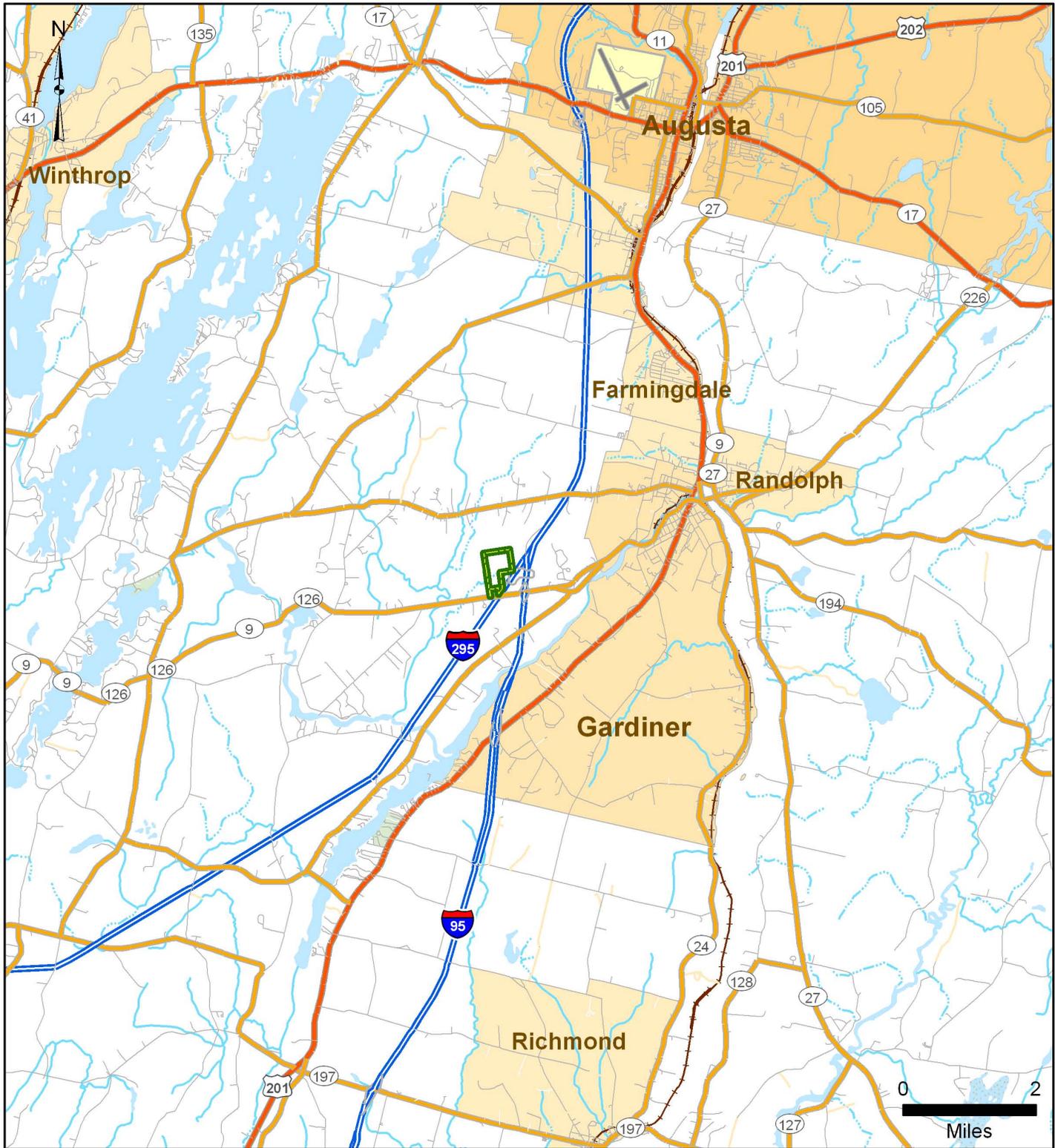
USGS	United States Geological Survey
------	---------------------------------



Operational Range Assessment Program
Phase I Qualitative Assessment
Gardiner Training Site, ME



Figure 1-1
General Gardiner Training Site Location



Installation

- Installation Boundary

Data Sources:
ARID-GEO 2007, ESRI StreetMap USA 2005

Date:.....March 2008
Prepared By: EA Engineering, Science & Technology
Prepared For:..... U.S. Army
Contract Number:..... W912DR-05-D-0008