

**FINAL
OPERATIONAL RANGE ASSESSMENT PROGRAM
PHASE I QUALITATIVE ASSESSMENT REPORT
WEST CAMP RAPID
RAPID CITY, SOUTH DAKOTA**

OCTOBER 2008

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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 South Dakota Army National Guard's (SDARNG's) West Camp Rapid 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.

The 739.68-acre West Camp Rapid is located adjacent to the western edge of Rapid City, South Dakota, in Pennington County. The SDARNG uses the installation to train its soldiers in support of achieving its various missions. An update to the Army Range Inventory Database-Geodatabase (ARID-GEO) was submitted to the U.S. Army Environmental Command in December 2005. The ARID-GEO (2005) identifies eight operational range areas, all of which are eligible for the Phase I Assessment. The eight operational range areas evaluated in this Phase I Assessment encompass the entire installation, with a total operational range area of 739.68 acres, and the sum of the range areas is 776.93 acres. The total operational range area was derived from the Operational Use Area (total range area) acreage as reported in ARID-GEO (2005). In ARID-GEO (2005), several of the ranges overlap; hence, the sum of range areas is greater than the total installation area. (No portion of the installation is identified as other than operational area.) Training activities conducted at West Camp Rapid include the use of the three small arms ranges, one grenade launcher range, two rotary wing landing pads, one training and maneuver area, and one obstacle course (ARID-GEO, 2005).

Potential MCOC sources identified at West Camp Rapid consist of firing points and impact areas. In general, MCOC from primary source areas potentially impact the following source media: (1) soil (e.g., impact berms, impact areas surrounding targets) and (2) surface water / sediment.

Potential MCOC can be released to groundwater (down gradient), surface water / sediment (downstream), or the food chain via a variety of release mechanisms. Release mechanisms for soil may include leaching from soil to groundwater or erosion and runoff to nearby streams. Once potential MCOC are deposited in surface water / sediment, they have the potential to migrate downstream, recharge the shallow groundwater, or be taken up by aquatic plants or animals. Release mechanisms for surface water / sediment are natural streamflow and sediment transport.

The main human receptors are users of water from off-installation wells and persons fishing in Rapid Creek. The main ecological receptors are wetlands located off-installation.

The eight operational ranges at West Camp Rapid are categorized as Unlikely.

Unlikely – Five-Year Review

Eight ranges at West Camp Rapid are categorized as Unlikely, totaling 739.68 acres. These ranges consist of three small arms ranges, one grenade launcher range, two rotary wing landing pads, one training and maneuver area, and one obstacle course. 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.

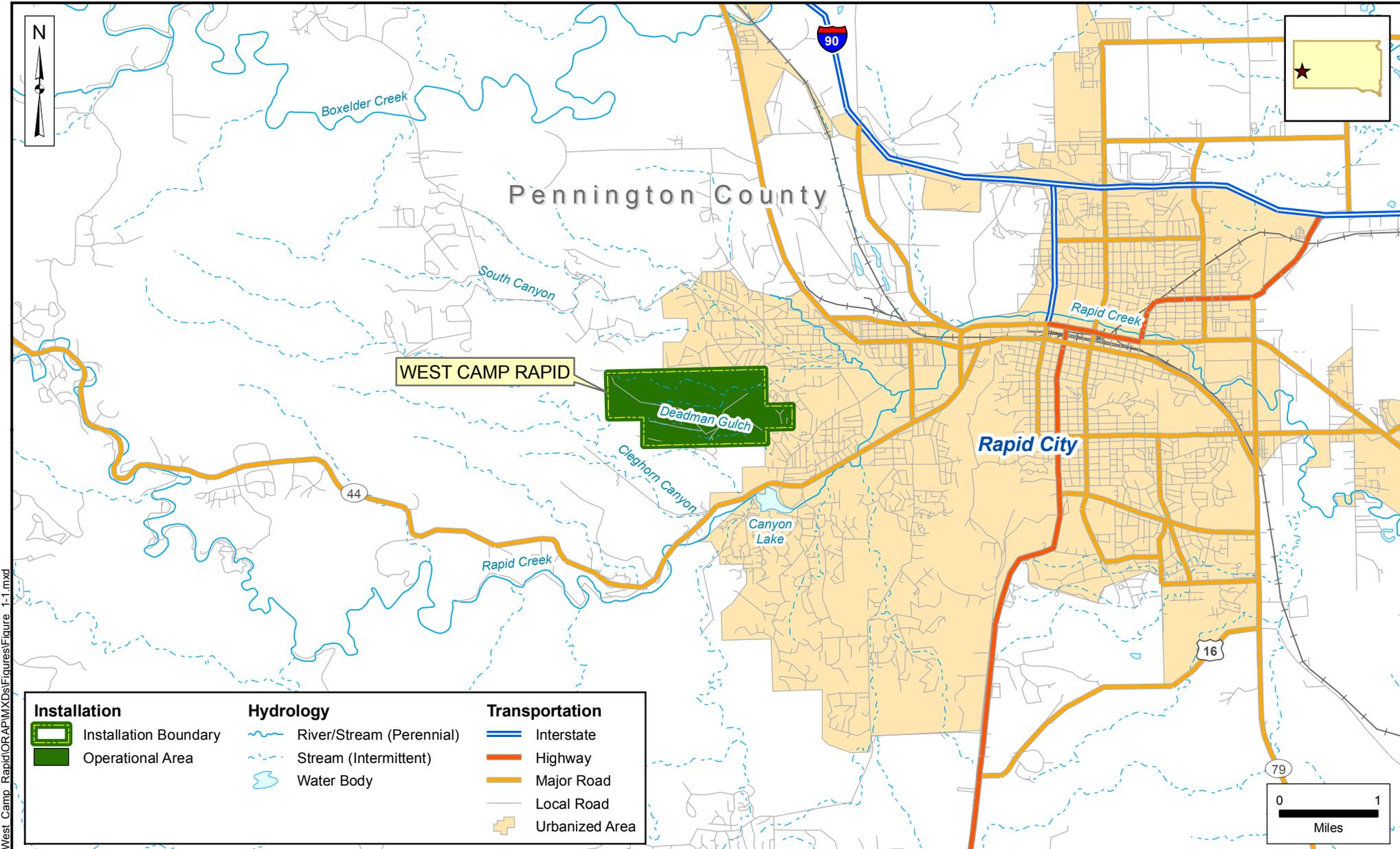
Table ES-1 summarizes the Phase I Assessment findings.

Table ES-1: Summary of Findings and Conclusions for West Camp Rapid

Category	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	Eight operational ranges; 739.68 acres	Firing points and impact areas around targets	None	Not evaluated (no pathways identified)		Re-evaluate during the five-year review. No pathways were identified.
		No source—limited or no military munitions use	Not evaluated (no source identified)		Re-evaluate during the five-year review. No source was identified.	

ABBREVIATIONS/ACRONYMS

amsl	Above Mean Sea Level
ARID-GEO	Army Range Inventory Database-Geodatabase
bgs	Below Ground Surface
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.)
gpm	Gallons per Minute
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
HUC	Hydrologic Unit Code
LS	Limited Source
M	Munitions used. (This refers to range grouping; M designation always precedes applicable pathway.)
MCOC	Munitions Constituents of Concern
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.)
RDX	Cyclotrimethylenetrinitramine
RFMSS	Range Facility Management Support System
SDARNG	South Dakota Army National Guard
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
USGS	United States Geological Survey
°F	Degrees Fahrenheit



**Operational Range Assessment Program
Phase I Qualitative Assessment
West Camp Rapid, SD**

**Figure 1-1
General West Camp Rapid Location**

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

Date: October 2008
Prepared By: Malcolm Pirnie, Inc.
Prepared For: U.S. Army
Contract: W912DR-05-D-0004



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