FINAL OPERATIONAL RANGE ASSESSMENT PROGRAM PHASE I QUALITATIVE ASSESSMENT REPORT NATIONAL GUARD TRAINING CENTER SEA GIRT SEA GIRT, NEW JERSEY

April 2008

Prepared for:

UNITED STATES ARMY CORPS OF ENGINEERS, BALTIMORE DISTRICT P.O. Box 1715 Baltimore, Maryland 21203

and

UNITED STATES ARMY ENVIRONMENTAL COMMAND Aberdeen Proving Ground, Maryland 21010

Prepared by:

EARTH RESOURCES TECHNOLOGY, INC. 10810 Guilford Road, Suite 105 Annapolis Junction, MD 20701



ABBREVIATIONS/ACRONYMS

ARID-GEO	Army Range Inventory Database-Geodatabase						
bgs	Below Ground Surface						
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act						
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.)						
°F	Fahrenheit						
GW	Groundwater pathway identified. (This refers to range grouping; M						
	designation always precedes GW designation.)						
Н	Human receptors identified. (This refers to range grouping; pathway						
	designation always precedes H designation.)						
HE	High Explosives						
HMX	Cyclotetramethylenetetranitramine						
LS	Limited Source						
М	Munitions used. (This refers to range grouping; M designation always						
	precedes applicable pathway.)						
msl	Mean Sea Level						
MCOC	Munitions Constituents of Concern						
NG	Nitroglycerin						
NGB	National Guard Bureau						
NJARNG	New Jersey Army National Guard						
NJDMAVA	New Jersey Department of Military and Veterans Affairs						
NJDEP	New Jersey State Department of Environmental Protection						
ODP	Ocean Drilling Program						
ORIS	Operational Range Inventory Sustainment						
PU	Pathway unlikely or incomplete. (This refers to range grouping; M						
	designation always precedes PU designation.)						
RDX	Cyclotrimethylenetrinitramine						
RFMSS	Range Facility Management Support System						
SW	Surface water pathway identified. (This refers to range grouping; M						
	designation always precedes SW designation.)						
T&E	Threatened and Endangered						
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						
USFWS	United States Fish and Wildlife Service						
USGS	United States Geological Survey						

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 the National Guard Training Center Sea Girt (Sea Girt) 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.

Sea Girt, occupying approximately 189 acres, is centrally located 39 miles east of Trenton, on the eastern New Jersey shore of the Atlantic Ocean. The surrounding areas to the north, west, and south are residential. It has been used for military training since 1885. The installation is used primarily for academic and field training, and weapons qualification training by military units and law enforcement tenant agencies. The majority of the military training occurs during inactive duty training weekends.

As part of the Operational Range Inventory Sustainment (ORIS), an update to the Army Range Inventory Database-Geodatabase (ARID-GEO) was submitted to the U.S. Army Environmental Command in March 2007 (ARID-GEO [2007]). The ARID-GEO (2007) identified 10 operational range areas encompassing approximately 120 acres. A total of 69 acres was identified as other than operational acreage.

Primary MCOC sources identified at Sea Girt consist of small arms ranges and field training areas. In general, MCOC from primary source areas potentially impact the source media of soil (e.g., impact berms, impact areas surrounding targets). Additionally, MCOC can be released to groundwater (down gradient) by leaching from soil to groundwater. Groundwater is expected to flow towards the Atlantic Ocean.

It is unlikely that during intermittent recreational use of coastal water, human receptors will be exposed to MCOC migrating to the Atlantic Ocean via groundwater. There are no impacted ecological receptors or sensitive environments as groundwater is expected to flow into the Atlantic Ocean.

The 10 operational ranges at Sea Girt are categorized as Unlikely.

<u>Unlikely – Five-Year Review</u>

Ten ranges at Sea Girt are categorized as Unlikely, totaling approximately 120 acres. These ranges consist of field training range, small arms ranges, impact areas, and other ranges. 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 Sea Girt
-------------	--

Category	Total Number of Ranges and Acreage	Group Identification	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	10 operational ranges; 119.96 acres	MGW	Small arms firing	Shallow groundwater to Atlantic Ocean	None	None	Re-evaluate during the five-year review. No receptors were identified (see Section 5.2 for details).
		LS	No source – limited or no military munitions use	Not evaluated (no source identified)			Re-evaluate during the five-year review. No source was identified (see Section 5.2 for details).