

**FINAL
OPERATIONAL RANGE PHASE I QUALITATIVE ASSESSMENT REPORT
MILITARY OCEAN TERMINAL SUNNY POINT
SOUTHPORT, NORTH CAROLINA**

MARCH 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:

MALCOLM PIRNIE, INC.
701 Town Center Drive
Suite 600
Newport News, Virginia 23606

The logo for Malcolm Pirnie, Inc. consists of the words "MALCOLM" and "PIRNIE" stacked vertically in a bold, white, sans-serif font. The text is centered within a solid black rectangular background.

ABBREVIATIONS/ACRONYMS

ARID-GEO	Army Range Inventory Geodatabase
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CSM	Conceptual Site Model
DNT	Dinitrotoluene
DoD	Department of Defense
DODI	Department of Defense Instruction
DOE	Department of Energy
DPTMS	Directorate of Plans, Training, Mobilization and Security
DPW	Department of Public Works
°F	Degrees Fahrenheit
kg	kilogram
LS	Limited or no munitions have been used on the range
MC	Munitions Constituents
MCOC	Munitions Constituents of Concern
mg	milligram
mm	millimeter
MOTSU	Military Ocean Terminal Sunny Point
MPU	Range group where: Munitions have been used on the range, but migration pathways are unlikely or incomplete.
MSW	Range group where: Munitions have been used on the range. A surface water migration pathway was identified, but no receptors have been identified.
MGW	Range group where: Munitions have been used on the range. A groundwater migration pathway was identified, but no receptors have been identified.
MSWGW	Range group where: Munitions have been used on the range. Groundwater and surface water migration pathways have been identified, but no receptors have been identified.
MSW (H/E)	Range group where: Munitions have been used on the range. The surface water source-receptor interaction is potentially complete (for human or ecological receptors).
MGW (H/E)	Range group where: Munitions have been used on the range. The groundwater source-receptor interaction is potentially complete (for human or ecological receptors).
MSWGW (H/E)	Range group where: Munitions have been used on the range. The surface water and groundwater source-receptor interactions are potentially complete (for human or ecological receptors).
NC	North Carolina
N/A	Not applicable
NCCGIA	North Carolina Center for Geographic Information and Analysis
ORAP	Operational Range Assessment Program
RCW	Red Cockaded Woodpecker
RLL	Rough-leaved Loosestrife
TM	Training and Maneuvering
U.S.	United States
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine

USACE	United States Army Corps of Engineers
USAEHA	United States Army Environmental Hygiene Agency
U.S.C.	United States Code

EXECUTIVE SUMMARY

PURPOSE:

This qualitative assessment, hereinafter referred to as Phase I Assessment, evaluates Military Ocean Terminal Sunny Point's (MOTSU) operational range area 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. The Phase I Assessment results in the categorization of operational ranges as appropriate, as follows:

- **Referred – Refer to Appropriate Cleanup Program:** ranges with compelling evidence (e.g., sampling data) to indicate the presence of an off-range release that potentially poses an unacceptable risk to human health or the environment;
- **Inconclusive – Phase II Quantitative Assessment Required:** ranges where existing information either is insufficient to make a source-receptor interaction determination or indicates the potential for such interaction to be occurring; or
- **Unlikely – Five-Year Review¹:** 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.

SUMMARY OF FINDINGS:

To facilitate the qualitative analysis, MCOC sources, potential migration pathways from a range, and potential off-range human and/or ecological receptors associated with the ranges at MOTSU were evaluated. Each range was then placed into one descriptive group that meets the criteria for the Unlikely category.

The three operational ranges at MOTSU that were included in the qualitative assessment have been placed into the following category.

- **Unlikely** – Three ranges consisting of small arms ranges and a training and maneuver area totaling 7.37 acres

These findings are summarized in **Table ES-1**.

¹ All operational ranges must be periodically re-evaluated to determine if there is a release or substantial threat of release of MCOC from an operational range to an off-range area. Range groups categorized as Unlikely are to be re-evaluated at least every five years. Re-evaluation may occur sooner if significant changes (e.g., changes in range operations, site conditions, regulatory changes) occur that affect determinations made during the Phase I Assessment.

Table ES-1: Summary of Findings, Conclusions, and Recommendations for MOTSU

Category	Group Identification	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Recommendations (Future Steps)
Unlikely	Limited source	Three operational ranges; 7.37 acres	No source – limited or no military munitions use	Not evaluated	Not evaluated	Not evaluated	Re-evaluate during the five-year review.