FINAL
OPERATIONAL RANGE ASSESSMENT PROGRAM
PHASE I QUALITATIVE ASSESSMENT REPORT
TOOELE ARMY DEPOT
TOOELE, UTAH

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Prepared for:

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EXECUTIVE SUMMARY

PURPOSE:

This qualitative assessment, hereinafter referred to as Phase I Assessment, evaluates Tooele Army Depot's (TEAD's) 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 Review[1]:** 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 TEAD were evaluated. Each range was then placed into one of several descriptive groups that meet the criteria for the Unlikely category.

The four operational ranges at TEAD that were included in the Phase I Assessment have been placed into the following category.

Unlikely – Four ranges, totaling 576 acres, consisting of an actively used Small Arms Range and three ranges that are not currently in use: a Small Arms Range and two munitions testing sites.

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.

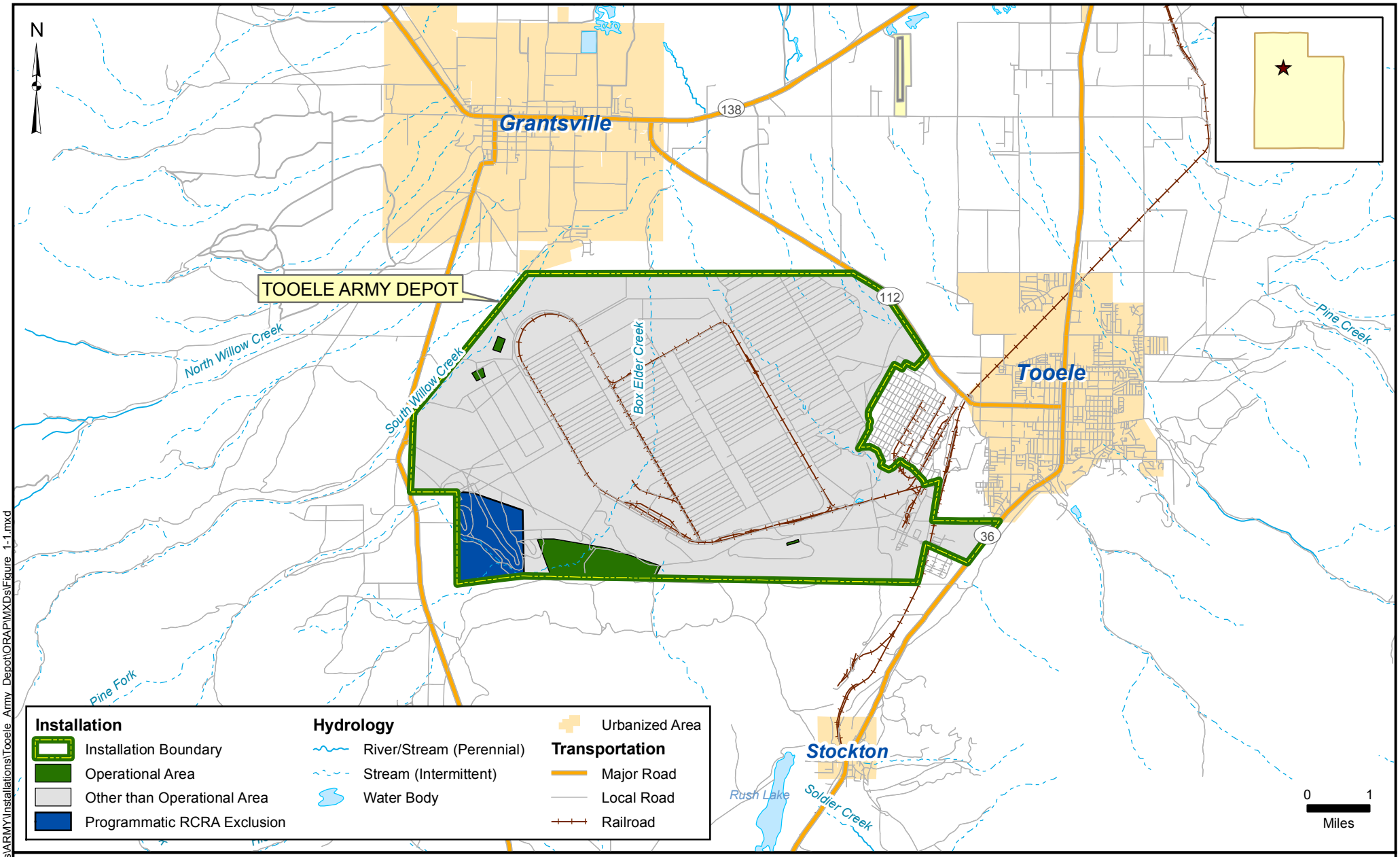
Table ES-1: Summary of Findings, Conclusions, and Recommendations for TEAD

Category	Group Identification	Total Number of Ranges and Acreage	Source(s)	Pathway(s)	Human Receptors	Ecological Receptors	Conclusions and Rationale
Unlikely	Munitions used; surface water and groundwater pathways not present	2 operational ranges totaling 23 acres	Firing points, berms, craters, and impact areas	None	Not evaluated (no pathways were identified)		Re-evaluate during the five-year review. No pathways were identified.
	Limited source	2 operational ranges totaling 553 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.

ABBREVIATIONS/ACRONYMS

°F	Degrees Fahrenheit
µg/g	Micrograms Per Gram
amsl	Above Mean Sea Level
ARID-GEO	Army Range Inventory Geodatabase
bgs	Below Ground Surface
BRAC	Base Realignment and Closure
CSM	Conceptual Site Model
DCD	Deseret Chemical Depot
DNT	Dinitrotoluene
DoD	Department of Defense
DODI	Department of Defense Instruction
DOE	Department of Energy
DPTMS	Directorate of Plans, Training, Mobilization and Security
ECC	Environmental Chemical Corporation
FS	Feasibility Study
HMX	Cyclotetramethylenetetranitramine
LS	Limited or no munitions have been used on the range.
MC	Munitions Constituents
MCOC	Munitions Constituents of Concern
MEC	Munitions and Explosives of Concern
mm	Millimeters
MGW	Munitions have been used on the range. A groundwater migration pathway was identified, but no receptors have been identified.
MGW (H/E)	Munitions have been used on the range. The groundwater source-receptor interaction is potentially complete (for human or ecological receptors).
MPU	Munitions have been used on the range, but migration pathways are unlikely or incomplete
MSW	Munitions have been used on the range. A surface water migration pathway was identified, but no receptors have been identified.
MSW (H/E)	Munitions have been used on the range. The surface water source-receptor interaction is potentially complete (for human or ecological receptors).
MSWGW	Munitions have been used on the range. Groundwater and surface water migration pathways have been identified, but no receptors have been identified.
MSWGW (H/E)	Munitions have been used on the range. The surface water and groundwater source-receptor interactions are potentially complete (for human or ecological receptors).
MULTIMED	Multimedia Exposure Assessment Model
NPL	National Priorities List
OB/OD	Open Burn/Open Detonation
ORAP	Operational Range Assessment Program
ORIS	Operational Range Inventory Sustainment
PRG	Preliminary Remedial Goal
RCRA	Resource Conservation and Recovery Act
RDX	Cyclotrimethylenetrinitramine
RI	Remedial Investigation

SWMU	Solid Waste Management Unit
TEAD	Tooele Army Depot
TEAD-N	Tooele Army Depot – North Area
TEAD-S	Tooele Army Depot – South Area
TECA	Tooele Chemical Activity
TNT	Trinitrotoluene
UDEQ	Utah Department of Environmental Quality
U.S.	United States
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
UT	Utah



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Operational Range Assessment Program
Phase I Qualitative Assessment
Tooele Army Depot, UT

Figure 1-1
Installation Location

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

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