

## 1<sup>st</sup> Stockpile Destruction: 1<sup>st</sup> Apr 2003





## 2<sup>nd</sup> Stockpile Destruction: 2<sup>nd</sup> Aug 2019





# TMAC Demining Training





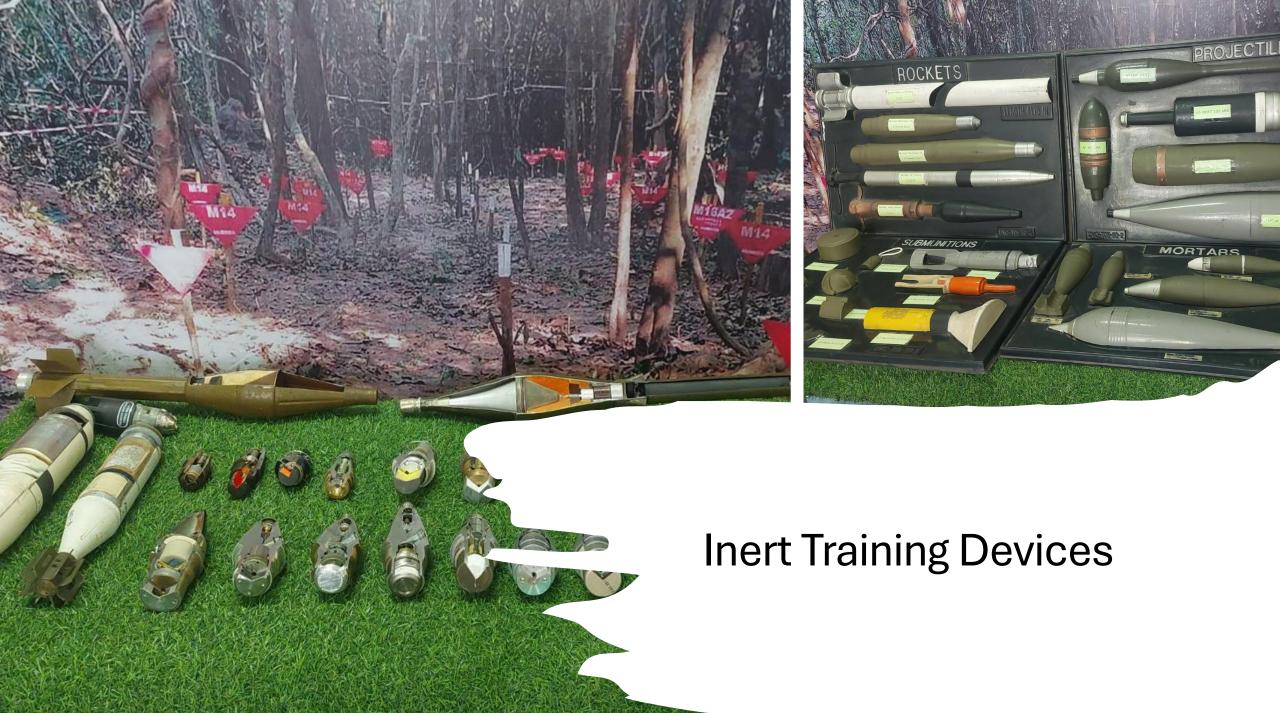




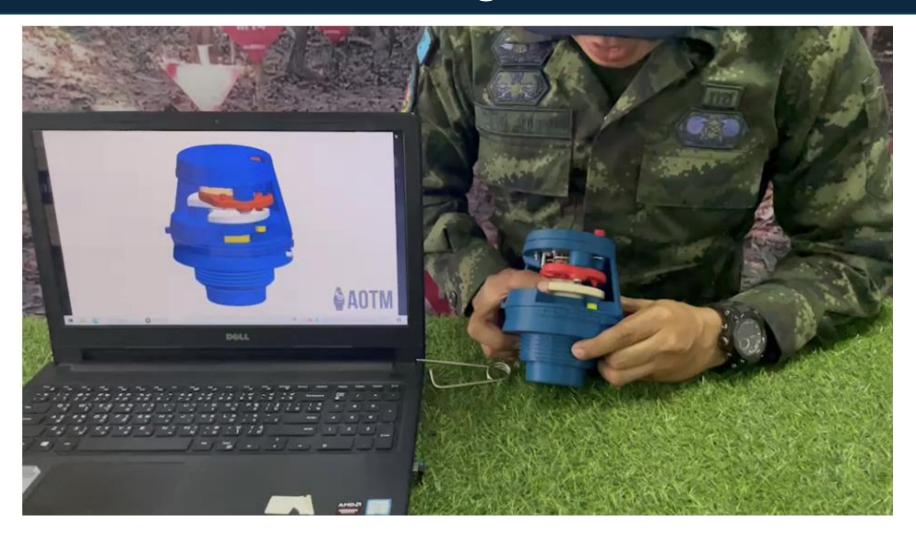
### Inert Training Devices and Replicas for TMAC Demining Training



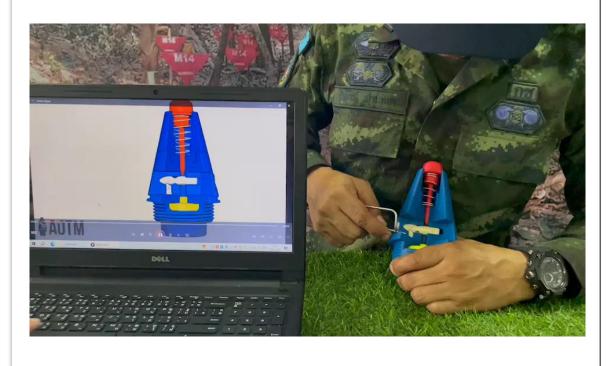


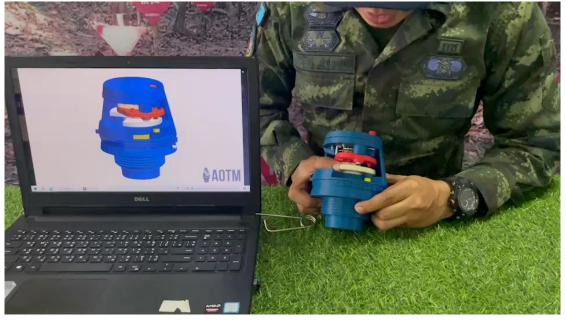


# **AOTM Training Ordnance**



## Simulation







# TMAC and Advance Technologies

### Technologies

#### Existing:

#### Additive Manufacturing

- 3-D Printed Binary Charges Containers
- 3-D Printed Targets

#### Vehicles:

- Bearcat and RAMBO
- Minewolf/GCS-200
- Mobile Cutting System

#### Requirements

- Information Management System
- Hot weather PPE
- Detectors
- Center of Excellence Training and Testing Center

### 3-D Printed Charge Containers





Cooperation: TMAC, Golden West and MARFORPAC

3-D printed binary containers. Current results highlights:

- Costs and logistics Effectiveness
- One barrel provide enough binary 5,000 3-D-printed containers
- One barrel costs less \$2,000 USD / each charge being ~25 US cents
- Future plans
  set up a small in-country 3-D lab

### Metallurgically Accurate 3-D Printed Mines

Alternative to using live anti-personnel mines for training



### Vehicles



### RAMBO UTV Mobile Operators Station

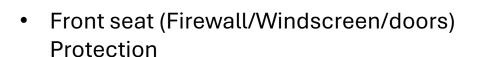
Mobile two-person operational command station custom configured with several design features for the user needs.

- Carry operational supplies tools, PPE, etc.
- Low cost









- Solar Panel with onboard power storage
- Computer mount/IP camera ready



### Bearcat



## Mini-Minewolf





# Mobile Cutting System



## Technology Requirements



- 1. Information Management System
- 2. Personnel Protection Equipment (PPE)
- 3. Detectors

## Mine Risk Education: MRE





