THE DEPARTMENT OF DEFENSE

EOD and Humanitarian Mine Action

Colonel Marue “Mo” Quick

Chief, Explosive Ordnance Disposal & Humanitarian Mine Action
OASD Partnership Strategy & Stability Operations
2011 Global Explosive Ordnance Disposal Conference and Exhibition
Purpose

To welcome, and to provide a brief overview of the DOD Explosive Ordnance Disposal Program to our attendees, industry partners, distinguished visitors, and honored guests, as we assemble for the Second Annual Global Global EOD Conference and Exhibition to network, exchange ideas, and remember our fallen comrades.
Agenda

- Welcome
- What is EOD
- Attack the Network
- EOD Capabilities
- EOD Operational Deployments
- Other Missions
- EOD Training
- EOD Integration
- Challenges
- What we still need
- Summary
- EOD Heroes
The EOD Memorial Foundation is a nonprofit organization dedicated to honoring the legacy of our fallen EOD Warriors by providing for maintenance and upkeep of the physical memorial at Eglin AFB, FL, funding and facilitating the annual EOD Memorial Ceremony & Ball, and providing scholarships to family members of active duty, former, retired, and fallen members of the EOD Community.

http://www.eodmemorial.org/

The National Defense Industrial Association (NDIA) is America’s leading Defense Industry Association promoting national security. NDIA is proud to provide a legal and ethical forum for the exchange of information between Industry and Government on National Security issues.

www.ndia.org/
DoD has invested significant resources in rapidly fielding technologies to meet an ever increasing and changing IED threat.

These technologies continue to protect our force, allow us to carry the fight to the enemy, and have significantly reduced the casualties among our EOD Members.

It has only been through the **innovation, cooperation,** and **diligent efforts** of our **industry partners** that this has been able to happen.

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**DOD has Invested $16.6 Billion In Counter IED Technologies**
DoD invests taxpayer dollars in people and technology in response to a rapidly changing IED threat.

Results: Proven technology + better training = lives saved
What is EOD?

“The committee recognizes the dedication and courageous professionalism of the Joint Service EOD force, and acknowledges the bravery associated with defeating IED’s, countering WMD’s, and eliminating explosives hazards from the battlefield….

…EOD forces are indispensable combat enablers and contribute significantly to security, stability, counterinsurgency, and counterterrorism objectives …”

**EOD is not CBRNE**

“JP 1-02 Department of Defense Dictionary of Military and Associated Terms”

**EOD Incident** — The suspected or detected presence of unexploded or damaged explosive ordnance which constitutes a hazard to operations, installations, personnel, or material.

**CBRNE Incident** — An emergency resulting from the deliberate or unintentional release of nuclear, biological, radiological, or toxic or poisonous chemical materials, or the detonation of a high-yield explosive.

Explosive Ordnance — All munitions containing explosives, nuclear fission or fusion materials, and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket, and small arms ammunition; all mines, torpedoes, and depth charges; demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.
EOD *is not* Explosive Clearance

**Clearing operation** — An operation designed to clear or neutralize all mines and obstacles from a route or area (JP 3-15).

**Clearing operations** are conducted to completely eliminate obstacles, whether along a route or in a specified area. Obstacles may be explosive or non-explosive. Clearing operations involving explosive obstacles are especially difficult because the detection systems employed are imperfect and neutralization systems available are only partially effective (JP 3-15).
EOD is a Critical Enabler

Total EOD Force Structure

<table>
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<th>Navy</th>
<th>Air Force</th>
<th>USMC</th>
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EOD Combat Missions
- Iraq
- Over 112,500 IED Missions Conducted to date

EOD Combat Missions
- Afghanistan
- Approximately 45,750 IED Missions resulting in over 20,453 Level 1 Exploitation Reports

EOD is a critical enabler who despite their small size is making a significant impact on current combat operations.
EOD is the Critical Link to Attacking the Network

A Five Step Process

Step 1. Defeat the Device
Step 2. Collect and Exploit the Scene
Step 3. Process Technical Forensic Exploitation
Step 4. Develop Device Profiles / Identify Networks
Step 5. Disseminate Actionable Intelligence

Attack the Network
EOD – Is the only **authorized** force trained, manned and equipped to render safe IEDs and UXOs.
In COIN, the side that learns faster and adapts more rapidly—the better learning organization—usually wins. counterinsurgencies have been called learning competitions (FM 3-24)
EOD: The Critical Link

**Step 3**
Process Technical Forensic Exploitation

**Level 1**
IEDs identified, rendered safe, place, time, conditions recorded, evidence processed and photographed, tactical characterization completed

**Level 2**
Fingerprints, main charge identified, device type and manufacturing, electronics, and trigger analysis

**Level 3**
Terrorist Explosive Device Analytical Center (TEDAC)

**Fingerprints**

**DNA**
Hairs found on tape.

**Toolmarks**

**Trace Evidence**
Fabric from pressure plates
EOD: The Critical Link

Fabric Analysis

Step 4. Develop Device Profiles

Toolmark Match

Identify Cells

DOD in collaboration with Interagency, and Coalition partners has focused much of our investment towards these capabilities.
EOD: The Critical Link

Step 5
Disseminate Actionable Intelligence

“...reduce IED attacks by eliminating the most prolific IED builders...Get the network disrupted before the emplacer gets the mission...”

Attack the Network
EOD: The Critical Link

It All Starts with the EOD Warrior

Tactical Exploitation Partners

Level 1
- EOD
- WIT (AUS)
- WIT (GBR)
- WIT (USMC)

Level 2
- EOD
- CEXC
- JEFF/EFL
- CITP
- JDEC-A

Level 3
- EOD
- JIEDDO
- ATF
- FBI
- TEDAC

Results

- 63,000 Total evidence boxes submitted
- 2,000 DNA profiles
- 300 Latent print matches
- 160 Trace matches
- 1,600 Toolmark matches
- 6,000 IED electronics reports
- 2,500 Device associations

EOD is integrated at every level of exploitation and maneuver
EOD Capability Development

- Improvised WMD Defeat
  - Full Spectrum EOD Warrior
    - Identify; render safe; TECHINT exploit; evaluate TTPs; post blast analysis; transport; and disposal

- Improvised Explosive Device Disposal (IEDD)
  - Identification; assessment; determine hazard area; render safe; dismantle; leak seal and package for transport; TECHINT exploit; final disposal

- Bio/Chem/Nuc Munitions Disposal (BCMD)
  - Bulk ammo disposal; cache disposal; CEA; sub-munitions clearance; UXO render safe TECHINT exploitation; Ammunition accidents / investigations

- Conventional Munitions Disposal (CMD)
  - Increasing Technical Difficulty & Increasing Training Requirement

“There are no “safe” procedures for rendering safe and disposing of Unexploded Ordnance, Improvised Explosive Devices, or other explosives, merely a procedure that is considered the least dangerous.” (Army Regulation 75-15, Policy for Explosive Ordnance Disposal)
What makes EOD “special”

- EOD has been recognized as a critical asset in DoD and National Strategic Documents, NDAA, QDR, HSPD 19
- EOD is the only authorized force trained, manned and equipped to render safe explosive, nuclear, biological, and chemical IEDs and UXOs
- EOD is the only DOD force trained and certified to identify, render safe, and dispose of foreign ordnance
- EOD is part of a global network of EOD partners and allies NATO, Spanish, AUS, GBR, CAN, and others focused on the C-IED Fight
- EOD teams have the requisite skill and knowledge to identify WMD and WMD facilities, conduct initial exploitation, and supervise follow on specialist exploitation teams
Current Operational Deployments

Operation New Dawn
- EOD
- EOD
- EOD
- EOD
- EOD

Operation Enduring Freedom
- EOD
- EOD
- EOD
- EOD
- EOD

Army
- EOD

Navy
- EOD

Air Force
- EOD

USMC
- EOD
Other Missions

- Defense Support to Civilian Authorities
- Very Important Person Protection Support
- Humanitarian Mine Action
- Training
Defense Support of Civilian Authorities

Background

- DoD EOD has 60+ year History of Supporting Civil Authorities
- DoD EOD is the preeminent EOD Force in CONUS
- HSPD 19 Combating Terrorist Use of Explosives in CONUS calls for increased DoD / DOJ cooperation
- 2010 QDR calls for an increased C-IED capability in CONUS
- DoD Policies being updated to reflect current reality

Emerging Threat to the Homeland

Dear Iran, Wa ‘Alykum as-Salam…”Similarly, the mujahidin leadership are today asking the brothers in the west specifically to attack interests in the West instead of coming here to Yemen, based on your ability, you choose the target. Your pool of targets are so large, so make sure to think of all the available options. An example of something local, easy and effective is attacking an army recruiting center, nightclub, highway, or busy shopping mall…..” Inspire, Spring 2011, Issue 5
Defense Support of Civilian Authorities

**Authorities**

In response to a *request for assistance* from a civil authority, under *imminently serious conditions* and if time does not permit approval from higher authority, DoD officials may provide an *immediate response* by temporarily employing the resources under their control, subject to any supplemental direction provided by higher headquarters, to *save lives, prevent human suffering, or mitigate great property damage* within the United States.  

**Synopsis**

- DoD always acts in a supporting role
- DoD responds when the threat exceeds other local, state, and federal assets
- DoD support primarily involves response to military munitions and explosives items
- DoD maintains the capability to provide full spectrum EOD support when requested

**Legislative Environment**

- The *Posse Comitatus Act* of 1878 prohibits DoD from exercising law enforcement powers within the US
- DoD Directive 3025.18 provides guidance
The Department of Defense provides Explosive Ordnance Disposal (EOD) support to the United States Secret Service (USSS) and Department of State (DOS) for the protection of very important persons.

DoD Directive 3025.13

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<th>EOD Vip Support Missions</th>
<th>EOD Teams</th>
<th>Man-hours</th>
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Fiscal Year 2010

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MAN-HOURS

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Humanitarian Mine Action

EOD is the **Force of Choice** for Providing Humanitarian Mine Action Assistance to Partner Nations (CJCSI 3207.01B)

EOD Supports HMA Efforts by providing the equipment and training to build capacity in mine affected countries. Training may include:

- Demolitions
- Probing Techniques
- Minefield Marking
- Mine / UXO ID and Disposal
- Booby traps
- Demining Tools
- Minefield Handoff
- Operation of Mine Detectors
EOD Operational Tempo

Preparation For Deployment

Deploying

-12 Months
-9 Months
-6 Months
-3 Months
0 Months

Individual Skills Training
Theater Specific Training
CTC Rotational Training
JATAC Electronics
Home Made Explosives
CBRN-Sensitive Site Exploitation
Post Blast Analysis
JATAC Tactical EOD
Gator

Non- Deploying

- Reset from Prior Deployment
- Backstop Support
- NTC/JRTC O/C Augmentation
- Installation Range Support
- DSCA Missions
- VIP Protective Support
- Humanitarian Mine Action Missions
- EOD Team Leader Certification
- Professional Development
- Required Military Service Training
- EOD Proficiency Training
- Physical Training / Weapons Qualification
Naval School Explosive Ordnance Disposal

28 Weeks, 3 Days

**Demo**
- Explosive Safeties
- Explosive Effects
- Elec / Non Elec

**Tools and Methods**
- RSP Tools
- Dearmer
- Rocket Wrench
- Tape and line

**Core**
- Color Codes
- Ordnance ID
- AEODPS
- Recon

**Ground Ordnance**
- Grenades
- Rockets
- Projectiles
- Mines

**Air Ordnance**
- Bombs
- Guided Missiles
- Aircraft Hazards

**IEDs**
- Basic IEDs
- X-Ray
- Bomb Suit

**Bio / Chem**
- Chemical Agents
- Bio Hazards

**Nukes**
- Nuclear Weapons Systems

**WMD**
- Safeties
- Terminology
- Detection
- PPE

There are apx. 1161 students currently on board at NAVSCHEOD!

The Average Student takes 246 calendar days to graduate!
EOD Training

Advanced Improvised Explosive Device Disposal
4 Weeks

Concept

To provide Advanced Improvised Explosive Device (AIED) TTPs to EOD Technicians and personnel from other key federal agencies. Diagnose, disable, contain and dispose of sophisticated IEDs in varied environments to include battlefield operations, peacekeeping operations and homeland defense.

Course Layout

- **Module A (2 weeks)**
  - Electronic Countermeasures
  - Robotic Operations
  - Electronics in IED/WMD design and diagnostics
  - Home Made Explosives
  - Chemical, Biological, Radiological, Nuclear (CBRN) Detectors

- **Module B (2 weeks)**
  - Scenario based, EOD team operations FTX
EOD Training

Tactical Post Blast Course
1 Week

Concept

Formalized training on proper TTP’s for post blast forensic intelligence gathering and tactical site exploitation operations conducted in non-permissive environments. Students learn their role within the Weapons Technical Intelligence process in order to provide supported maneuver commanders with critical information requirements and actionable intelligence.

Course Layout

- **EOD Resource Center Prerequisite**
  - Weapons Technical Intelligence (WTI Lexicon),
  - Crater Analysis

- **Module A (2 days in classroom)**
  - Current IEDD and Post Blast Trends
  - IED Electronic Components

- **Module B (Practical Exercise)**
  - High tempo to replicate the theater of operations
  - 15 actual blast site scenarios modeled after current enemy TTPs

Half of all EOD missions in theater are Post Blast
EOD Training

Global Anti-Terrorism Operational Readiness (GATOR) 2 Weeks

Concept

A pre-deployment training program for US Joint Service and International EOD units to hone technical render safe and other critical EOD operator skills against explosive ordnance and IED threats currently faced in combat theaters. Utilizes current threat IED construction and employment techniques;

Course Layout

- **Module A (1 week)**
  - Theater specific intelligence update focuses on IED and other explosive ordnance threats
  - New technology, tools and equipment
  - Electronic Warfare equipment employment theory

- **Module B (1 week)**
  - Scenario based, EOD team operations FTX
  - 96 hrs of night operations
EOD Training

Joint Center of Excellence (JCOE) Counter IED Training

Concept

The Joint Center of Excellence (JCOE) is the execution arm of JIEDDO's C-IED training program. JCOE is located at Fort Irwin, Ca. and has been operational since April 2006. Together with the four service-specific centers of excellence (COEs), JCOE provides deploying forces with training on rapidly fielded C-IED equipment and capabilities.

Specific Courses

- CBRN Sensitive Site Exploitation
- Tactical EOD Course
- Training to Identify and Report HME
- IED Electronics
- Tactical Post Blast Analysis
- C-IED Mobile Assistance Training Teams
EOD Integration

Integration Into National Strategic Documents

Integration Into Combatant Commander Processes and Requirements

Integration Into DoD Doctrine and Joint Publications
EOD Challenges

- Maintaining EOD capabilities and force structure in an environment of fiscal reviews and efficiencies
- Capturing best practices and lessons learned and integrating those into the individual services institutional processes
- Recruiting & maintaining quality personal
- Transitioning from a continual deployment cycle to a home based training cycle
What We Still Need

- Greater ability to detect and neutralize improvised or homemade explosives (HME)
- Next generation robotics, bomb suits, and radiographic systems
- Equipment and procedures to fight the IED fight in the Homeland, communications, vehicles, exploitation techniques, ECM, kinetic tools, etc...
- Standoff explosives detection capabilities
- Lightweight tools and explosives for dismounted operations
Summary

- EOD Warriors are better trained and equipped now than they have ever been in the past, and are honed by nearly 10 years of continuous combat operations.

- EOD Warriors are integrated at all levels of combat operations and are a critical enabler to countering IED’s to permit Attacking the Network and supporting C-IED Targeting.

- When not deployed, EOD Warriors conduct a myriad of activities including DSCA, VIPS, HMA, installation support, and training missions; they do not sit idle waiting on the next deployment.

- We have made significant progress, but still have a ways to go in improving equipment and training, and integrating lessons learned.

- EOD has performed superbly in an extremely hazardous and high operational tempo environment, and for that has paid a price; we must not forget the significant sacrifices made by our entire EOD Family.

- We are the OSD Advocate for all services Explosive Ordnance Disposal programs and are always looking for new and different ways to leverage the Office of the Secretary of Defense to advance the EOD cause.
The Numbers

- Since 1942 the number of EOD Warriors added, or will be added to the EOD Memorial - 269
- From Jun 1942-Sep 2001 (59 yrs) there were 177 names added to the Wall.
- From Sep 2001- Today (10 Yrs) we have added or will add an additional 92 names
- 34% of all EOD losses have occurred since Sep 2001
- Majority killed by Improvised Explosive Devices
- Since the Inaugural 2010 Global EOD Conference there have been 20 EOD Warriors killed and 94 EOD Warriors wounded in Iraq / Afghanistan
EOD Heroes

We Remember

SSgt Adam L. Perkins
26 April 1983 – 17 May 2010

SSG Shane S. Barnard
13 Dec 1971 – 19 May 2010

SSgt Jordan B. Emrick
19 Dec 1983 – 5 Nov 2010

SRA Michael J. Buras
28 July 1987 – 21 Sep 2010

SPC Wade A. Slack
22 Mar 1989 – 6 May 2010

SSG Derek J. Farley
21 May 1986 – 17 Aug 2010

MSgt Daniel L. Fedder

GySgt Floyd E. Holley

SGT Jason T. Smith
22 Dec 1981 – 19 Nov 2010

SSgt Joshua J. Cullins
25 March 1982 – 19 Oct 2010

CPT Jason T. McMahon
24 Oct 1974 – 5 Sep 2010

GySgt Justin J. Schmalstieg
16 May 1982 – 15 Dec 2010

SRA Daniel Johnson
20 June 1987 – 5 Oct 2010

SSG Matthew J. West
20 May 1974 – 30 Aug 2010

GySgt Christopher Eastman
21 Sep 1981 – 18 July 2010
Questions?

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703-614-5824

Let's keep them off the wall !!!