

IED CAMPAIGN IN THE U.S. HOMELAND: ARE U.S.
MILITARY EOD UNITS PREPARED TO RESPOND?

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Homeland Security Studies

by

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

IED CAMPAIGN IN THE U.S. HOMELAND: ARE U.S. MILITARY EOD UNITS PREPARED TO RESPOND? by MAJ Jon B. Vaughn, U.S. Army, 165 pages.

The United States faces an increasing threat from a variety of terror groups. These groups have shown intent to utilize improvised explosive devices (IED) in their attacks. Advancements in information technology give terrorists access to encrypted communications and information on IED device construction and methods. The threat of an organized IED campaign in the Continental United States is credible. U.S. military explosive ordnance disposal (EOD) units regularly support civil authorities for isolated incidents in the United States as part of a defense support to civil authorities mission. However, EOD units have not had to integrate into a civil authority task force for a widespread, protracted response like an IED campaign. This study examines threat analysis, law, doctrine, policy and strategy, and common practice through an analytical framework of DOTMLPF (Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities) to assess the readiness of military EOD units to integrate into a civil task force to command and control military EOD teams. Research showed units are mostly prepared for this scenario. Minor improvements in the doctrine, training, and leadership and education could improve readiness.

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I sincerely hope the scenario described in this paper never develops. However, I hope this work serves to increase the U.S. military's preparedness to protect the citizens of this nation if it does develop.

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ACRONYMS

AAR	After Action Review
ALF	Animal Liberation Front
AQAP	Al Qaeda in the Arabian Peninsula
ARNORTH	United States Army-North
BATFE	Bureau of Alcohol Tobacco Firearms and Explosives
BMC	Bomb Management Center
C2	Command and Control
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-yield Explosives
CIED	Counter Improvised Explosive Device
CONUS	Continental United States
CP	Command Post
CREW	Counter Radio Electronic Warfare
DCE	Defense Coordinating Element
DCO	Defense Coordinating Officer
DHS	United States Department of Homeland Security
DoD	United States Department of Defense
DODD	Department of Defense Directive
DOTMLPF-P	Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities and Policy
DSCA	Defense Support of Civil Authorities
EIR	Explosives Incident Report
ELF	Earth Liberation Front
EOC	Emergency Operations Center

EOD	Explosive Ordnance Disposal
ESF	Emergency Support Function
FBI	Federal Bureau of Investigations
FEMA	Federal Emergency Management Agency
FORSCOM	United States Army Forces Command
GCC	Geographic Combatant Command
HVE	Homegrown Violent Extremist
ICP	Incident Command Post
ICS	Incident Command System
IED	Improvised Explosive Device
IRA	Immediate Response Authority
IS	
ISIS	Islamic State in Iraq and Syria
JCD	Joint Capabilities Development
JFLCC	Joint Forces Land Component Command
JFO	Joint Field Office
JOC	Joint Operations Center
JP	Joint Publication
JTF	Joint Task Force
JTF-MA	Joint Task Force-Massachusetts
KKK	Ku Klux Klan
M19CO	March 19th Communist Organization
MAC	Multi-agency Command
MEB	Maneuver Enhancement Brigade
NCO	Non-commissioned Officer

NIMS	National Incident Management System
NMS	National Military Strategy
NRF	National Response Framework
NSS	National Security Strategy
OPCON	Operational Control
PME	Professional Military Education
PSBS	Public Safety Bomb Squad
RFA	Request for Assistance
SAC	Special Agent in Charge
SECDEF	United States Secretary of Defense
SSIC	Senate Select Committee on Intelligence
TACON	Tactical Control
TILEIA	Terrorism Incident Law Enforcement Investigation Annex
TTP	Tactics, Techniques, and Procedures
UFF	United Freedom Front
USBDC	United States Bomb Data Center
USC	United States Code
USNORTHCOM	United States Northern Command
VBIED	Vehicle Borne Improvised Explosive Device
WMD	Weapon of Mass Destruction

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CHAPTER 1

INTRODUCTION

Background

The use of improvised explosive devices (IED) threatens the U.S. homeland on a daily basis. To help combat this threat, all branches of the U.S. military conduct defense support to civil authorities (DSCA) operations in support of federal, state, and local law enforcement through the deployment of explosive ordnance disposal (EOD) teams to render safe explosive hazards. Military EOD units generally send one to two teams consisting of three to six individuals to support law enforcement in response to isolated incidents involving explosive hazards in areas where state, or local bomb squads either do not exist or require augmentation to safely deal with the device. The authority to provide this type of DSCA support originates from the Immediate Response Authority (IRA) outlined in Department of Defense Directive (DoDD) 3025.18, Defense Support to Civil Authorities (DSCA), which gives local commanders the authority to provide immediate support to civil authorities.¹ The typical EOD DSCA support mission usually lasts for a few hours, and the military EOD personnel involved immediately return to their base to assume normal duties in support of their respective installations until civil authorities request support again.

To date, terror attacks involving IEDs in the United States have consisted of individuals or very small cells building IEDs to conduct one specific attack. In these cases, military EOD units provide DSCA support to law enforcement in the same manner as they always have via IRA. A sustained IED threat involving multiple personnel using sophisticated devices and terrorist tactics against multiple targets over an extended period

time has not yet developed in the United States to respond to this type of threat; civilian authorities may require support from multiple EOD teams working across multiple civilian jurisdictions as part of a federal response.

DSCA support to counter a protracted IED campaign of the nature described presents a few challenges from a command and control (C2) perspective for military EOD units. For example, military response to this type of operation exceeds the authorities outlined in DoDD 3025.18. Under the immediate response criteria laid out in DoDD 3025.18, local commanders have the authority to provide immediate DSCA support without approval from U.S. Northern Command (USNORTHCOM). This authority granted to enable commanders to provide immediate support to civil authorities to preserve the life and valuable property of U.S. civilians in a time of immediate danger or peril. However, DoDD 3025.18 says immediate response support must be temporary in nature and terminated when the need no longer exists (i.e., local authorities have garnered sufficient capability to respond without help from the military). DODD 3025.18 also places a specific restriction on immediate response by requiring a reassessment of the need to provide continued military support if the crisis lasts longer than 72 hours.²

DSCA support to a protracted IED campaign will potentially require the commitment of military EOD forces over a length of time longer than 72 hours and with prior planning. A DSCA response of this nature does not fit in the confines of immediate response. USNORTHCOM, the geographic combatant command (GCC) charged with overseeing all DoD homeland defense and DSCA missions, should be involved in the planning and oversight of any long term DSCA response to an IED campaign in the

United States.³ Therefore, units providing DSCA support must have a direct command and reporting link to USNORTHCOM once immediate response no longer applies.

If a sustained IED campaign develops in the United States, military EOD will most likely respond to an initial incident under immediate response authorities. The assumption for this study is that the campaign will escalate in volume and intensity over time in a localized area involving several jurisdictions. Military EOD will commit an increased number of assets as the threat develops and will require a C2 structure to oversee these forces until USNORTHCOM makes the decision whether to establish a joint task force (JTF) or another command structure. One would expect to find adequate military doctrine that defines the requirements as well as the roles and responsibilities for an element to C2 military EOD forces during a complex EOD DSCA mission without an established JTF. If an IED campaign develops and exceeds civil authorities' technical capability but not their incident command capability, there is potential that they may not request a federal response to an extent that warrants the establishment of a USNORTHCOM JTF. Civil authorities may only require military support in the form of EOD teams to augment public safety bomb squads (PSBS) in rendering safe explosive hazards. This means that multiple EOD teams could be providing response outside of IRA without a military C2 structure to handle coordination efforts with civil authorities or reporting to USNORTHCOM.

Purpose

The purpose of this study is to assess the U.S. military's preparedness to C2 EOD forces providing DSCA support to an IED campaign during the period between initial response and the decision to transition to a USNORTHCOM JTF. EOD teams across the

military conduct extensive training on a regular basis to prepare teams to respond to IEDs in CONUS, but they typically do not focus on the C2 aspect of EOD response within the framework of a sustained IED threat in the United States. Research will examine the application of current strategic and operational policies governing DSCA overlaid with current military doctrine to assess their impact on the employment of U.S. military forces in a planned operation to counter a sustained IED threat. The specific focus will center on military C2 of EOD forces providing DSCA in support of a civilian law enforcement agency response to a sustained IED threat in the Continental United States (CONUS). This study will attempt to determine the proper construct of a military C2 element in terms of manning and experience level of personnel, command and support relationships, and training required. Additionally, this study will assess how the C2 element will integrate into the National Response Framework (NRF) and a National Incident Management (NIMS) organized civil authority command structure to provide expert EOD technical advice, facilitate information flow to military and civilian authorities, resource additional military capability if needed, and oversee military EOD team operations. This work will apply the initial conclusions made from examining the above requirements for the C2 of EOD units during a prolonged DSCA mission to the U.S. military's categories for capabilities development: doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF). The intent of this process is to identify potential capability gaps that could negatively affect military EOD's ability to support civil authorities during a protracted IED campaign.

This work will also examine military and civilian agency doctrine and procedures to determine the criteria that trigger the establishment of a military EOD C2 element

during an ongoing incident. Initially, EOD forces will most likely respond under the IRA. If the IED campaign escalates and EOD teams need to position forward, joint EOD units must be prepared to integrate with and support the lead civilian agency C2 structure.

Research Questions

The primary research question for this study is: how well are U.S. military EOD units prepared to effectively C2 the deployment of EOD forces in support of civil law enforcement to counter an IED terror campaign in the United States as it develops from an initial incident to a sustained threat requiring the establishment of a USNORTHCOM JTF?

Secondary research questions are necessary to fully answer the primary question and to effectively frame the problem surrounding EOD support to a sustained IED campaign in CONUS. The secondary research questions related to this work are:

1. What is the potential for a persistent IED threat to develop in CONUS?
2. What individuals or groups are likely to present an IED threat to CONUS?
3. To what extent are IEDs currently used in CONUS?
4. How does the use of IEDs and development of IED tactics in other areas of the world present a threat to the U.S. homeland?
5. How well do existing policies, laws, doctrine, account for EOD forces providing protracted DSCA support within a civil law enforcement task force without the establishment of a USNORTHCOM JTF?
6. What policies and strategy apply to a military DSCA response to IEDs in CONUS and how do they affect the military's ability to respond to an IED threat?

7. What laws govern the U.S. military's ability to support civil authorities as an IED campaign escalates over time and do existing laws enable or hinder the military's ability to support?
8. How well does civilian agency doctrine address the military's role in commanding and controlling a response to a prolonged IED incident?
9. How well does U.S. military and EOD doctrine address the C2 of EOD forces conducting a prolonged DSCA response mission?
10. What are the C2 requirements in terms of manning and training for EOD units in an extended DSCA support role if a JTF is not established in response to the threat?
11. What are the decision points to transition from immediate response for an initial IED incident to the establishment of a JTF as the incident escalates into a sustained IED campaign in CONUS?
12. What Doctrine, Organization, Training, Leadership and education, and Policy (DOTL-P) solutions are required to enable C2 of U.S. military EOD forces in response to a sustained IED campaign in CONUS?

Key Assumptions

Due to the lack of precedence for a sustained IED campaign in the United States, a thorough case study of U.S. military EOD forces providing DSCA support to an incident of that nature over an extended time is impossible. Therefore, answering the key research questions includes a few imperative assumptions:

1. A sustained IED threat will develop in the United States.
2. When that threat develops, it will exceed state, and local law enforcement capabilities to render safe explosive hazards requiring officials to request DSCA support in the form of U.S. military EOD assets for an unspecified amount of time to counter the threat.
3. U.S. military EOD forces will deploy forward to areas affected by the threat to reduce the response time and maximize time for crew refit and rest cycles rather than standing by to respond from their home military installation.
4. The federal or state task force requesting a prolonged DSCA response from EOD will not require any additional support from the U.S. military to counter the threat, and the situation will not rise to the level that USNORTHCOM will be asked to establish a JTF.

The assumption that a sustained IED threat will exceed PSBS capability is necessary to examine a military EOD response to assist civil agencies to counter the threat. As most major metropolitan cities in the United States have developed bomb squad capability in the wake of the Global War on Terrorism, it is easy to assume that larger jurisdictions will not need support from military EOD forces.⁴ However, a sustained and sophisticated threat has the potential to overwhelm civilian law enforcement bomb squad capabilities through incident volume or possibly degrade civilian capabilities by causing casualties to law enforcement bomb technicians. Civilian jurisdictional issues could also limit law enforcement's ability to respond. If there is a terrorist network conducting an IED campaign over a multi-jurisdictional area, the mayor or governor of one jurisdiction may want to retain as much capability as he or she can to

protect the citizens of that jurisdiction rather than providing support to neighboring jurisdictions. U.S. military EOD support could alleviate civilian authorities from having to deal with this type of situation. The assumption that the response to a sustained, coordinated bombing campaign will overwhelm civil authorities' PSBS capacity provides a setting to analyze the readiness of U.S. military EOD units to bolster civil authority capabilities.

This work assumes that U.S. military EOD forces must forward deploy to areas affected by a prolonged IED campaign to provide adequate support to civil authorities. If an IED campaign develops near a military installation with EOD assets, units can provide DSCA support from that base under IRA for each incident. However, few military installations in the United States have EOD units headquartered on them. It is highly likely that U.S. military forces will deploy forward to provide DSCA response to a prolonged IED campaign. This assumption allows for the examination of the transition from operations under IRA to a prolonged DSCA support mission.

Key Terms

After Action Review. A process initiated after all military operations and training events to record best practices and lessons learned.

Defense Support of Civil Authorities. A categorization used to describe all missions where military personnel assist U.S. civilian authorities. Typically associated with a military response to a crisis such as disaster relief.

Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities and Policy. An acronym used by the U.S. military to analyze force management and capability development. As the military develops new capabilities, it analyzes the

DOTMLPF categories in relation to new capabilities to identify any potential changes in its current posture needed to adequately integrate new capabilities.

Explosive Ordnance Disposal. A military occupational specialty responsible for the identification, render-safe, and disposal of explosive hazards including military ordnance, IEDs, and chemical, biological, radiological, and nuclear weapons.

Geographic Combatant Command. A U.S. military command responsible for C2 of all DoD personnel and operations in a geographic area of responsibility designated in the United States Unified Command Plan.

Improvised Explosive Device. More commonly known as a homemade bomb.

Joint Forces Land Component Command. A subordinate command to a GCC responsible for overseeing all land based military forces within a GCC's area of operations.

Joint Task Force. A military headquarters organization comprised of personnel from two or more branches of the U.S. military that is temporary in nature and organized to oversee military activities involved in a specific operation.

National Response Framework. Part of the national strategy for homeland security. A plan that coordinates efforts of federal, state, and local government agencies to unify response to homeland security and disaster relief incidents.

Public Safety Bomb Squad. Bomb squads employed by local or state civil agencies, typically part of local or state law enforcement agencies or fire departments. PSBS members are nationally credentialed by the Federal Bureau of Investigation (FBI) through completion of the FBI's Hazardous Devices School.

Limitations

This work uses only unclassified sources to make this research readily available for use by other researchers. Therefore, this work does not contain information on specific EOD and bomb squad locations, numbers of teams, and techniques used to render safe explosive hazards. Readers should expect ambiguity in discussion of an IED campaign's ability to exceed civilian law enforcement's capacity to respond. Specific data on this topic is limited, and researchers with access to this information and a need to know should find it relatively easy to access.

This study limits the examination of C2 requirements for EOD forces providing DSCA support to an IED campaign to the period between initial response and the decision to transition to a USNORTHCOM JTF. This work focuses on the C2 of EOD units within a civil authority task force with the assumption that an IED campaign in the United States will not rise to a level that exceeds federal and state law enforcement capacity to C2 the entire response.

In addition, due to classification requirements, this work does not address specific EOD or PSBS technical capabilities or authorities for the employment of specific counter IED (CIED) capabilities, particularly those related to the employment of Counter Radio Electronic Warfare (CREW). Currently, the authorities and procedures for the employment of CREW in CONUS are popular, controversial topics among military EOD and PSBS personnel. The topic of CREW employment in CONUS could benefit from further research, but will detract from the focus of this study. For the same reason, EOD response to chemical, biological, or radiological incidents in CONUS is not addressed.

Significance

Results of this study have the potential to identify critical capability gaps in the U.S. military's ability to adequately fulfill its mission to support civilian authorities in protecting the U.S. homeland from terrorist attacks. The findings from this work could help U.S. military forces better integrate and operate with civilian law enforcement agencies in response to a prolonged, complex IED campaign in the United States.

This study will also add to the base of scholarly works in the EOD field, which research for this project proved to be limited. Additionally, findings could help rewrite EOD unit standing operating procedures (SOPs) or potentially add improvements to EOD doctrine that benefit the entire U.S. military EOD career field.

Summary

IEDs are a persistent threat to the U.S. homeland.⁵ Civilian authorities across the nation have made great strides in developing capabilities within law enforcement agencies to counter this threat.⁶ A sustained, complex IED campaign has yet to develop and challenge law enforcement or PSBS capability in the United States. An assumption is that a threat of this nature will overwhelm law enforcement capability in some areas of the country and U.S. military EOD assets will be required to augment law enforcement bomb squads through a DSCA response. If multiple EOD teams deploy forward from their home installation to respond to an IED campaign, a military EOD C2 element could be essential for integration into the civil authority command structure to provide technical advice on safety considerations and EOD team employment.

This work will examine existing laws, policy, and doctrine to assess whether the U.S. military has identified definitive requirements and clear roles and responsibilities for

an EOD command element conducting support to civil law enforcement. The intent behind this research is to provide a comprehensive analysis of all official documents governing this type of DSCA mission and identify potential capability gaps in terms of doctrine, organization, training, leadership, and policy that would impact the U.S. military's ability to integrate an EOD C2 element into a civilian law enforcement command structure during a response to a protracted IED campaign in CONUS. To make this determination, it is important to have an in depth understanding of the potential threats that would illicit a DSCA response to an IED campaign; laws, policies, and doctrine that would apply to a U.S. military response; and thoughts from experts in the EOD field who have already examined similar problems.

¹ Deputy Secretary of Defense, Department of Defense Directive (DoDD) 3025.18, Subject: Defense Support to Civil Authorities (DSCA), Secretary of Defense, Washington, DC, September 2012, accessed October 6, 2016. <http://www.dtic.mil/whs/directives/corres/pdf/302518p.pdf>.

² Ibid.

³ Department of Defense, "Unified Command Plan," accessed November 5, 2016, <https://www.defense.gov/About/Military-Departments/Unified-Combatant-Commands>.

⁴ Geoffrey D. Stevens, *Whole of Government Approach to Countering Domestic IEDs: Leveraging Military Capabilities* (Syracuse, NY: Institute for National Security and Counterterrorism, Syracuse University, 2012), 6.

⁵ U.S. Bomb Data Center, Department of Justice, *United States Bomb Data Center (USBDC) Explosives Incident Report (EIR)* (Redstone, AL: U.S. Bomb Data Center, 2015), accessed November 9, 2016, <https://www.atf.gov/rules-and-regulations/docs/report/2015usbdcexplosiveincidentreportpdf/download>.

⁶ Stevens, 6.

CHAPTER 2

LITERATURE REVIEW

Introduction

The intent of this research is to determine how prepared the U.S. military is to C2 EOD forces supporting to civil authorities to counter an IED campaign in CONUS that exceeds civilian law enforcement technical capabilities to render safe and dispose of explosive hazards but does not rise to a level requiring USNORTHCOM to establish a JTF. To assist civilian law enforcement in this type of situation, the U.S. military will most likely deploy multiple EOD teams assisting law enforcement over a multi-jurisdictional area. This type of support may require a U.S. military EOD C2 element that can integrate into a civilian law enforcement command post (CP) or task force organization to provide technical advice on the protection of life and property from explosive hazards as well as the employment of military EOD teams.

Research began with the conduct of a brief threat analysis to determine the likelihood that a sustained IED campaign could develop in the United States. This analysis looked at established terror and extremist groups in the United States and their propensity for violence. It also examined current IED trends in the United States. After framing the problem with a threat analysis, study focused on national laws, policy, and strategy to understand the stances of the President, Congress, and the DoD on providing support to civil authorities to protect the U.S. homeland. An in depth understanding of these laws and policies are essential to the study of this topic. These documents define the authorities under which the U.S. military operates when supporting law enforcement and

highlight senior political leaders' views on the need to employ military capabilities to assist civil authorities.

A study of military doctrine and policy related to both EOD and DSCA operations followed the study of national law and policy. The purpose of the doctrinal study was to achieve a full understanding how military EOD units operate in CONUS and identify potential contradictions or gaps between national policy and military doctrine that could impact military EOD units providing long-term DSCA support to counter an IED campaign. Additionally, operating procedures for federal law enforcement as well as tenets of the NRF and the national incident management systems (NIMS) were studied concurrently with military doctrine to identify potential friction points and determine the best methods for integration of an EOD C2 element into a civilian law enforcement command structure.

Lastly, AARs from EOD CONUS missions and interoperability training exercises with civilian law enforcement were studied. This work examined these documents to identify potential problems and best practices for the C2 of military EOD forces during a DSCA response and assess any previous lessons learned that would be applicable to a military EOD response to support civil authorities during a protracted IED campaign in CONUS.

Assessing the Terrorist Threat in the United States

Accurately assessing the probability and nature of a terrorist attack in the United States is incredibly difficult. Research in this area is even more difficult if restricted to open sources. Source documents on this topic fall into two major categories. One is unclassified primary source documents produced by the many U.S. intelligence services

or other government agencies. The other is journal articles and research projects from experts who work in the field of counter terrorism. This work relies on both source categories to outline the potential for a protracted IED campaign in the United States. Most sources that focus on the overall terror threat agree on two major categories of terror threat in the United States: foreign violent extremists/foreign terrorism, and domestic terrorism. Robert Hodges identified these threats in a journal article written to raise awareness of existing terror threats to the United States.¹ His assessment concurs with a brief given to the Senate Select Committee on Intelligence (SSCI) by the FBI's Executive Assistant Director on Counterterrorism in 2002.² The overall assessment of the terror threat facing the United States today remains unchanged according to the Director of The National Counterterrorism Center's briefs to SSCI in 2015 and 2016.³ Foreign violent extremists refers to members of international terror organizations such as Al Qaeda or Islamic State in Iraq and Syria (ISIS). Domestic terrorism is divided into four categories: homegrown violent extremists (HVE), Right-wing, Left-wing, and Special Interest. HVEs are typically U.S. citizens or long-term residents of the United States who are influenced or "radicalized" by propaganda and have a loose association with international terrorist organizations or no association whatsoever.⁴ Right-wing extremists are typically categorized as racial hate groups, anti-government or anti-federalist groups, and fundamentalist or Christian identity groups.⁵ Organizations such as the Ku Klux Klan (KKK), Aryan Nation, Michigan Militia, and others fall into this category. Left-wing extremists who commit terror acts typically participate in socialist or anti-capitalist movements such as the March 19th Communist Organization (M19CO) or New African Freedom Fighters. The final category of domestic terrorists, special interest, shares some

views with left/right-wing groups but focuses on the resolution of a single issue versus a social revolution or government overthrow. Environmental activist groups such as the Animal Liberation Front (ALF) and Environmental Liberation Front (ELF) are examples of left-wing extremist groups.⁶

Studies conducted by the University of Arkansas Terrorism Research Center in Fulbright College, and the U.S. House Homeland Security Committee provide statistical data that add perspective to threat posed by each type of terrorist group. The University of Arkansas study titled *Pre-incident Indicators of Terrorist Incidents: The Identification of Behavioral, Geographic, and Temporal Patterns of Preparatory Conduct* focuses on pre-incident indicators of foreign, right-wing, left-wing, and special interest terrorism for all known U.S. terror attacks occurring from 1980 to 2003.⁷ The study provides good insight to show how prolific and effective each category of terror threat was during that timeframe except for the HVE category. The HVE threat had not fully developed when the study was published in 2003. The study also includes multiple case studies for notable terror attacks carried out by each category of terror threat except for HVEs. On the other hand, the House Homeland Security Committee study, published in 2016, provides accurate, up-to-date information on the still developing HVE threat.⁸

The Use of Improvised Explosive Devices in the United States

Data displaying trends for the use of IEDs in the United States was examined to assess the current IED and explosives threat level in CONUS. The intent was to develop a theory showing a logical progression of the presence of a significant IED terror threat in the United States through linking the existence of groups willing to use IEDs and the presence of IEDs. In other words, if multiple types of terrorist organizations exist in

CONUS that have demonstrated a will to use IEDs and IED use has occurred during attacks in CONUS, then it logically follows that a significant IED terror threat could materialize from one of the previously identified terror group categories. As previously stated, the intent is to show the potential for the development of a significant IED threat rather than a correlation between the existence of active terror groups and current levels of IED use. Apart from a few specific cases, there is not sufficient evidence to show a direct correlation between these terror groups and IED use in the United States.

The intent of displaying IED trends data is to provide credibility to the assumption that a protracted IED campaign could develop in CONUS. Data shows that IEDs are present in sufficient quantity in the United States and any of the identified terror threats could easily use IEDs to further their extremist ideologies. The sources used to obtain this information were the 2014 and 2015 *Annual Explosives Incident Reports* (EIRs) prepared by the Bureau of Alcohol, Tobacco, Firearms, and Explosives' (BATFE) United States Bomb Data Center (USBDC).⁹¹⁰ These reports not only show specific quantities by type for explosive devices used in the United States but also show the trend in overall quantity of IEDs dating back to 2010. Both reports show a decrease in the overall use of IEDs for the last three years but still demonstrate the presence of IEDs in sufficient quantity to lend credibility to assumption that a sustained IED threat could develop in the United States. This data comes from the Bomb Arson Tracking System (BATS) used by the FBI, BATFE, and state and local bomb squads to record all explosive related events that occur nationwide. The BATFE summarizes the data and publishes it in the annual EIR at the end of each calendar year.

National Law

A firm understanding of U.S. law regarding federal military support to civil authorities within the United States is key to understanding some of the challenges that U.S. military forces may encounter while supporting civil authorities in response to an IED campaign. As this work concentrates on the C2 of EOD units supporting civil authorities in CONUS, it is important to fully understand the authorities and limitations of IRA under which EOD teams will initially respond and how those authorities could change through various phases of an escalating IED campaign.

DoDD 3025.18, Defense Support of Civil Authorities combines the many portions of United States Code that apply to all aspects of DSCA support into a single document that is easily referenceable for DoD personnel setting DoD policy on the conduct of DSCA operations. Of importance to this work, DoDD 3025.18 references the Stafford Act section of Title 42, United States Code (USC) that clearly outlines IRA. Additionally, DoDD 3025.18 gives prescriptive guidance mandating that DSCA planning be compatible with the NIMS of the NRF.¹¹ This guidance is key in understanding the requirements for the C2 of EOD teams responding to an IED campaign. Lastly, DoDD 3025.18 sets limitations on DSCA operations that have significant impact on EOD operations such as length of time and criteria for response under IRA.¹²

National Level Policy and Strategy

A review of strategic and operational level guidance was conducted to reach a firm understanding of national level leadership's direction on countering IEDs and terror threats within the United States. The primary documents used in this review were, Presidential Policy Directive-17, *Countering Improvised Explosive Devices* (signed by

President Barak Obama in 2013), *National Security Strategy* (NSS) (signed by President Obama in 2015), *National Military of Strategy of the United States* (NMS) (signed by Chairman of the Joint Chiefs of Staff in 2015), and DoDD 3025.01, 3025.18, and 3025.21. While strategy documents give very broad and vague guidance, they do provide some insight to national level leadership's interpretation of the previously mentioned terrorist threats to the U.S. homeland. These documents allow the researcher to understand how threats to national security drive policy development to combat those threats; they are the first links in a chain of strategic guidance that culminates with clear DoD policy on how to conduct DSCA operations to counter threats to the U.S. homeland.

President Obama's directive, *Countering Improvised Explosive Devices*, acknowledges an approach using assets from all levels of government, including federal, to combat IED's in the United States.¹³ This directive focuses on maintaining current capability while improving intelligence, information sharing, and integration across all government levels.¹⁴ The NSS also shares President Obama's "whole-of-government" philosophy in countering threats to the U.S. homeland. This strategy also identifies and defines the "national interests" of the United States, which informs strategy at the lower levels of government.¹⁵

The NMS uses the national interests to prioritize military efforts, including counterterrorism and DSCA missions.¹⁶ Though the NMS does recognize DSCA as a vital mission for the joint force, DSCA ranks low on the overall prioritized list of joint force efforts.¹⁷ Despite the prioritization, DoD issued several policy letters to govern DSCA operations and recognize that DoD forces are key partners in the NRF. The key DoD policies that pertain to EOD DSCA operations are DoDD 3025.01, 3025.18, and

3025.21. DoD Manual 3025.01 provides an overall view of DSCA operations and general guidance for DSCA missions.¹⁸ DoDD 3025.18, as previously discussed, applies national law including the tenets of the Stafford Act to all DoD DSCA operations.¹⁹ DoDD 3025.21 discusses civil support to law enforcement, and its “Enclosure 5” contains specific guidance for EOD operations including expectations of the relationship between combatant commands (USNORTHCOM) and EOD units supporting civil authorities in their area of responsibility (CONUS).²⁰

Doctrine for EOD and DSCA Support

A thorough examination of both military and civil emergency response doctrine overlaid with national law and policy is imperative to assessing the U.S. military’s preparedness to respond to an IED campaign in CONUS. To better understand how U.S. military forces would integrate with a civil authority task force, it is necessary to study both military and civilian emergency response doctrine. Military doctrine applicable to this research is divided into two subcategories, DSCA doctrine as well as EOD specific doctrine. Civil authority emergency response doctrine related to an IED campaign in the United States is also divided into two subcategories. These categories are general emergency response doctrine, NRF and the NIMS, and doctrine covering the response to an incident of terrorism, specifically a bombing or bombing campaign. The key documents covering this type of operation are Joint Publication (JP) 3-28, *Defense Support of Civil Authorities*, Army Doctrine Reference Publication (ADRP) 3-28, *Defense Support of Civil Authorities*, Army Technical Publication (ATP) 3-28.1, *DSCA*, JP 3-42, *Joint Explosive Ordnance Disposal*, ATP 4-32, *Explosive Ordnance Disposal Operations*, and AFI 32-3001, *Explosive Ordnance Disposal Program*. These documents

are critical to this study because they all touch on various subjects related to the research question.

JP 3-28 provides the doctrine that covers the entire range of DSCA operations for the joint force: Army, Navy, Marine Corps, and Air Force. All the tenets of JP 3-28 apply to any DSCA operation including EOD response missions, but some portions of JP 3-28. When considering a military EOD response to counter a CONUS IED threat, one key portion of JP 3-28 is the application of NRF and NIMS to the joint force.²¹ The other portion of JP 3-28 that is highly important to this study is Chapter II, Paragraph 8 that describes the various types of military C2 structures for a large-scale DSCA response.²²

All service specific doctrine related to DSCA is derived from JP 3-28 including ATP 3-28.1 which is a multi-service publication applicable to the joint force. This publication provides more detail and clarity than JP 3-28 and includes some best practices for DSCA missions. ATP 3-28.1 contains an entire section related to EOD response missions in CONUS. This information provides planning considerations for the employment of EOD forces for use by non-EOD DSCA planners. However, one portion does recommend placing an EOD liaison element within the Bomb Management Center (BMC) during IED responses.²³ The mention of an EOD liaison element in joint doctrine could prove important to assessing how well prepared U.S. military EOD units are to C2 forces during a sustained IED threat in the United States.

JP 3-42 addresses different types of EOD C2 structures for EOD organization as part of the headquarters of a JTF during overseas contingency operations. It does not address a C2 structure for a joint EOD response in CONUS under IRA without a JTF nor does it show how EOD forces should integrate with a law enforcement command

structure for a DSCA mission.²⁴ However, JP 3-42 does contain an appendix dedicated to supporting law enforcement which mentions the potential for a transition from IRA to a formal request for assistance (RFA) for prolonged support to civilian authorities but does not give guidance on how that transition should occur.²⁵

ATP 4-32, *Explosive Ordnance Disposal Operations* is the Army's most detailed doctrinal publication for EOD. Research showed it to have the only doctrinal reference to a command element positioned forward for large-scale incidents.²⁶ However, ATP 4-32 does not specify the expected duties of the command element in relation to integration with civilian authorities.

AFI 32-3001 is Air Force EOD specific doctrine. It is not as detailed in CONUS response guidance as ATP 4-32 but does provide some additional insight in how U.S. military EOD units fit into the ESFs of the NRF.²⁷ All single service doctrine, aside from ATP 4-32 and AFI 32-3001, researched during this project proved to provide the same level of fidelity on CONUS response operations as joint doctrine and simply serves to prescribe the tenets of JP 3-42 to the single service level.

EOD and Civil Authority Integration in Training and Operations

The final category of documents this work reviewed is AARs from training exercises involving integration of military EOD assets with civil law enforcement agencies as well as an AAR from the 2013 Boston Marathon Bombing response. The first set of AARs examined is from the Raven's Challenge Exercise. Raven's Challenge is an annual joint interagency exercise hosted in multiple locations across the country to build CIED capacity in both military and civil agencies.²⁸ Most AARs for Raven's Challenge do not meet the open source information criteria for this research project. However, two

AARs from Raven's Challenge X in 2016 are available. These AARs conducted by 79th Ordnance Battalion (EOD) and 63d Ordnance Battalion (EOD) show potential integration and interoperability issues between military EOD command elements and civil authority command personnel. Both AARs identify issues with integration into the FBI's Bomb Management Center (BMC). While both reports agree that the BMC is a great capability, 63d EOD Battalion experienced confusion with defining the DoD role within the BMC.²⁹ Likewise, 79th EOD Battalion struggled with finding the right organization for their liaison element in the BMC.³⁰

The Boston Marathon Bombing provides an interesting example of what a sustained IED campaign could look like, especially at the outset. The situation involving the attack itself and related suspicious package calls over the course of several days overwhelmed local PSBS assets.³¹ 387th EOD Company from the Massachusetts Army National Guard and an active duty U.S. Navy team both responded to requests for assistance from authorities in Boston.³² During the response, a National Guard JTF, Joint Task Force-Massachusetts (JTF-MA) was established to C2 the National Guard response effort. The AAR conducted by JTF-MA shows some of the same integration issues identified in the Raven's Challenge AARs as well as additional issues with communications between EOD units and other responders.³³

Additionally, members of the Boston Police Department and other PSBS members that responded to the Boston Marathon Bombing conducted exclusive interviews with Brian Castner in the months after the attack. Castner's article highlighting these interviews provides some valuable lessons learned that could be pertinent to efforts to counter a sustained IED campaign in CONUS. This article shows

how quickly a dynamic, developing situation can overwhelm EOD and PSBS assets.³⁴ In this article, there is also insight from PSBS members discussing the changing IED threat in the United States. The threat articulated through Castner's interviews is one that involves multiple bombers on the move with multiple bombs and multiple targets.³⁵

¹ Robert C. Hodges, "The Improvised Explosive Device Threat to the Homeland: American are not Prepared," *Small Wars Journal* (March 9, 2016), accessed October 18, 2016, <http://50.56.4.43/jrnl/art/the-improvised-explosive-device-threat-to-the-homeland-americans-are-not-prepared>.

² U.S. Congress, Senate, Dale L. Watson, Executive Assistant Director, Counterterrorism/Counterintelligence Division, Federal Bureau of Investigation, *Testimony Before the Senate Select Committee on Intelligence*, Washington, DC, February 6, 2012, accessed October 11, 2017, <https://archives.fbi.gov/archives/news/testimony/the-terrorist-threat-confronting-the-united-states>.

³ U.S. Congress, Senate, Nicholas J. Rasmussen, Director, National Counterterrorism Center, *Hearing Before the Senate Select Committee on Intelligence: "Current Terrorist Threat to the United States"*, Washington, DC, February 2015, accessed October 11, 2016, https://www.nctc.gov/docs/Current_Terrorist_Threat_to_the_United_States.pdf.

⁴ U.S. Congress, Senate, Dale L. Watson.

⁵ Brent L. Smith, Kelly R. Damphousse, and Paxton Roberts, *Pre-Incident Indicators of Terrorist Incidents: The Identification of Behavioral, Geographic, and Temporal Patterns of Preparatory Conduct* (Fayetteville: University of Arkansas Terrorism Research Center in Fulbright College, 2006), 1.

⁶ U.S. Congress, Senate, Dale L. Watson, 2-3.

⁷ Smith, Damphousse, and Roberts, 2.

⁸ U.S. Congress, *Terror Gone Viral: Overview of the 100+ ISIS-Linked Plots Against the West* (Washington, DC: House Homeland Security Committee, 2016), 3.

⁹ U.S. Bomb Data Center, Department of Justice, *United Bomb Data Center (USBDC) Explosives Incident Report (EIR)* (Redstone, AL: U.S. Bomb Data Center, 2014), accessed November 9, 2016, <https://www.atf.gov/file/105076/download>.

¹⁰ USBDC, EIR, 2015.

¹¹ Deputy Secretary of Defense, DoDD 3025.18.

¹² *Ibid.*, 5.

¹³ US, Office of the President, Presidential Policy Directive-17, *Countering Improvised Explosive Devices*. Obama White House Archives Online, February 2013, accessed October 16, 2016, https://obamawhitehouse.archives.gov/sites/default/files/docs/cied_1.pdf, 4.

¹⁴ *Ibid.*, 2.

¹⁵ U.S. President, *National Security Strategy* (NSS) (Washington, DC: The White House, 2015), accessed April 15, 2017, https://obamawhitehouse.archives.gov/sites/default/files/docs/2015_national_security_strategy.pdf, 1.

¹⁶ U.S. President, Presidential Policy Directive (PPD)-17, *Countering Improvised Explosive Devices* (Washington, DC: The White House, 2013), accessed October 16, 2016, https://obamawhitehouse.archives.gov/sites/default/files/docs/cied_1.pdf, i.

¹⁷ *Ibid.*, 11.

¹⁸ Office of the Under Secretary of Defense and Policy, Department of Defense (DoD) Manual 3025.01, *Defense Support of Civil Authorities Overview*, vol. 1 (Washington, DC: Government Printing Office, February 2013), accessed April 8, 2017, http://www.dtic.mil/whs/directives/corres/pdf/302501_vol01.pdf.

¹⁹ Deputy Secretary of Defense. DoDD 3025.18.

²⁰ Under Secretary of Defense for Policy, Department of Defense Instruction (DoDDI) 3025.21, Subject: Defense Support of Civilian Law Enforcement Agencies, Secretary of Defense, Washington, DC, February 2013, accessed April 15, 2017, <http://www.dtic.mil/whs/directives/corres/pdf/302521p.pdf>, 30.

²¹ Joint Chiefs of Staff (JCS), Joint Publication (JCP) 3-28, *Defense Support of Civil Authorities* (Washington, DC: Government Printing Office, July 2013), accessed April 8, 2017, http://www.dtic.mil/doctrine/new_pubs/jp3_28.pdf, I-5 - I-6.

²² *Ibid.*, II-11 – II-13.

²³ Headquarters, Department of the Army (HQDA), Army Technical Publication (ATP) 3-28.1, *DSCA* (Washington, DC: Government Printing Office, September 2015), accessed April 8, 2017, http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/atp3_28x1.pdf, 63.

²⁴ Joint Chiefs of Staff (JCS), Joint Publication (JP) 3-42, *Joint Explosive Ordnance Disposal* (Washington, DC: Government Printing Office, September 2016), accessed April 8, 2017, http://dtic.mil/doctrine/new_pubs/jp3_42.pdf, III-6 – III-9.

²⁵ Ibid., G-1 – G6.

²⁶ Headquarters, Department of the Army (HQDA), Army Technical Publication (ATP) 4-32, *Explosive Ordnance Disposal Operations* (Washington, DC: Government Printing Office, September 2013), accessed April 8, 2017, http://www.apd.army.mil/pubs/DR_pubs/DR_a/pdf/web/atp4_32.pdf, 3-3.

²⁷ U.S. Department of the Air Force, Air Force Instruction (AFI) 32-3001, *Explosive Ordnance Disposal Operations* (Washington, DC: Air Force e-publishing, May 2016), accessed April 14, 2017, http://static.e-publishing.af.mil/production/1/af_a4/publication/afi32-3001/afi32-3001.pdf, 47.

²⁸ National Explosives Task Force, Department of Justice, *Exercise Guide: Raven's Challenge 2017* (Washington, DC: Bureau of Alcohol Tobacco Firearms and Explosives, March 2017), 1-9.

²⁹ Steven M. Lenk, "AAR for 63d OD BN (EOD) Participation in Raven's Challenge," 20th CBRNE Command, accessed April 8, 2017, <https://army.deps.mil/army/cmds/20cbrne/StaffSection/G3/G33CurrentOps/AARs/Forms/AllItems.aspx?RootFolder=%2FArmy%2Fcmds%2F20cbrne%2FStaffSection%2FG3%2FG33CurrentOps%2FAARs%2FRaven%27s%20Challenge&FolderCTID=0x0120002925A02333E5654D9A325699FEAF270B&View={4E809C74-AC4F-4C02-BB57-7CF4B1E4657E}&InitialTabId=Ribbon%2EDocument&VisibilityContext=WSSTabPersistence>, 2.

³⁰ U.S. Department of the Army, 79th Ordnance Battalion EOD, *79th OD BN (EOD) After Action Review Raven's Challenge X: 10-23APR16, Ft Wolters*, 20th CBRNE Command, accessed April 14, 2017, <https://army.deps.mil/army/cmds/20cbrne/StaffSection/G3/G33CurrentOps/AARs/Forms/AllItems.aspx?RootFolder=%2FArmy%2Fcmds%2F20cbrne%2FStaffSection%2FG3%2FG33CurrentOps%2FAARs%2FRaven%27s%20Challenge&FolderCTID=0x0120002925A02333E5654D9A325699FEAF270B&View={4E809C74-AC4F-4C02-BB57-7CF4B1E4657E}&InitialTabId=Ribbon%2EDocument&VisibilityContext=WSSTab>, 3.

³¹ Brian Castner, The Exclusive Inside Story of the Boston Bomb Squad's Defining Day, *Wired*, October 25, 2013, accessed April 20, 2017, <https://www.wired.com/2013/10/boston-police-bomb-squad>, 8-11.

³² Ibid.

³³ Joint Task Force-Massachusetts, "Marathon Response 2013: After Action Review" (PowerPoint presentation, Massachusetts Army National Guard, May 2014), accessed April 8, 2017, <https://www.hsdl.org/?view&did=753403>, 18-20.

³⁴ Castner, 8-11.

³⁵ Ibid.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The purpose of this research study is to methodically ascertain the U. S. military's level of readiness to provide EOD support to civil authorities if a sustained IED threat emerges in CONUS. This project focuses on the U.S. military's ability to C2 military EOD units supporting civil authorities over an extended period through the escalation of a developing IED campaign. Part of this assessment examines the preparedness of EOD units to work within the framework of a civil authority task force without being under the C2 of a USNORTHCOM JTF. This study will look at applicable data through a lens using portions of U.S. military's Joint Capabilities Development (JCD) system used to create and evolve military capabilities through changes in doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P).¹ Materiel, personnel, and facilities will be excluded from the analysis framework. Specifically, this study focuses on the doctrine, organization, training, leadership and education, and policy (DOTL-P) components of DOTMLPF-P. The materiel, personnel, and facilities components of DOTMLPF-P are worthy of further study, but solutions for these categories may take considerable time to implement due to the military's lengthy acquisitions system. DOTL-P solutions on the other hand are less likely to require an acquisitions solution and could easily improve readiness in a shorter amount of time. Studying how current doctrine, organization, training, leadership and education, and policy allow the U.S. military to integrate into the NIMS through the NRF to provide

responsive, adequate support to civil authorities within the bounds national law is key to answering the research questions related to this study.

The method used for this analysis is the “describe-analyze-interpret” method, with some modifications, prescribed by Harry F. Wolcott in *Transforming Qualitative Data* to organize qualitative research into conclusive results.² The use of an analytical framework in Wolcott’s work is applicable to this study. The analytical framework, in this case DOTL-P, creates a structure to systematically evaluate the various data sources used and draw logical conclusions in an organized fashion. Wolcott applied his D-A-I method to fieldwork, interviews, and surveys. This method was easily modified for this study to review EOD doctrine, organization, training, leadership, and policy requirements necessary for military EOD to C2 multiple EOD teams within a civil authority task force over an extended period.

The initial step for analyzing the sources previously presented in chapter 2 was to describe the data contained in each one. In other words, the first step was the simple extraction and presentation of the data related to the research questions in raw form from each source. The purpose of this was to gain a complete picture of the existing data’s composition.

The next step in the method for this study, the analyze phase, was a content comparison of the data from each source in relation to the other sources. This content analysis was conducted in two parts. Each part had the purpose of identifying trends and themes among sources as well as contradictions and conflicting data between sources. All sources were first cross-referenced among other sources within each of the five categories listed in chapter 2: threat analysis, law, policy and strategy, doctrine, and incident and

training reports. The identified trends and contradictions were then compared among the five categories to identify major concurrences and contradictions across the five source categories: threat, law, policy, doctrine, and documented practice. This step yielded the initial findings of the research.

This initial set of conclusive data was then subjected to the analytical framework of doctrine, organization, training, and leadership and education (DOTL-P) to interpret the data. The DOTL-P framework helped give meaning to data regarding the readiness of military EOD units to C2 teams supporting a prolonged DSCA mission within a civil authority task force. The outcome of examining the data through the DOTL-P analytical framework was a set of conclusions that could help evaluate how well prepared the U.S. military EOD community is to assist civil authorities in countering a coordinated, sustained IED threat in CONUS. The exclusion of the materiel, personnel, and facilities components of DOTMLPF-P was intentional and serves to scope the research to identify readiness solutions that could change policy, doctrine, training, or unit organization without requiring a lengthy and expensive acquisitions or force development solution.

A materiel solution for the primary or secondary research questions is possible. Materiel solutions that would increase military EOD interoperability with civil law enforcement command elements and PSBS are certainly worthy of research.

The personnel aspect of JCD deals with the recruitment and training of military and civilian personnel with new skill sets that do not currently exist in the force structure.³ This study focused on the utilization of EOD qualified personnel to C2 EOD teams supporting a civil task force. EOD is a skill set that exists across all the joint services. Therefore, a personnel solution to the research questions was not probable.

Facilities were also excluded from the analytical framework of this study. Military DSCA missions, particularly EOD DSCA missions, are temporary in nature. Military EOD providing technical support during a civil response to a sustained IED campaign would return to their home military installation after the completion of each incident rather than establishing permanent facilities. However, military EOD units have not had to respond to a prolonged IED threat away from their home installation. A response of this nature could produce security problems for EOD equipment, ammunition, and explosives as well as sustainment issues without access to suitable facilities. The subject of a facilities solutions is a good topic for further research.

Two primary control methods ensured the validity of conclusions gained from the subjection of qualitative research data to the D-A-I method and the DOTL-P. The first control method was the adaptation of the analysis process itself from a proven method of analysis for qualitative data as described by Wolcott.⁴ The second control method was the collection of data from primary source documentation. With few exceptions, the data gained during research came directly from open source government publications and national law and policy documents. This method of data collection helped eliminate potential bias from previous researchers. Figure 1 shows a graphic depiction of the D-A-I method, as adapted from Wolcott, used for this study.

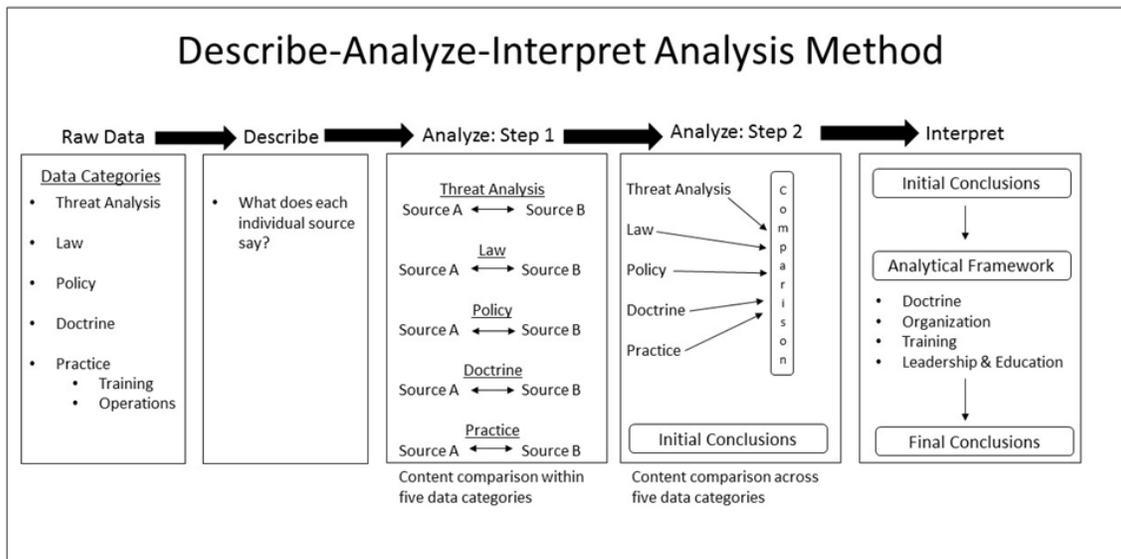


Figure 1. Describe-Analyze-Interpret Methodology

Source: Created by author.

Conclusion

The methodology used in this study was a systematic cross reference of five data source categories related to EOD operations in CONUS: threat, national law, national policy and strategy, doctrine, and reviews of training and operations. The intent of this cross reference was to analyze each source category through an analytical lens of DOTL-P to accurately assess how well the U.S. military is prepared to C2 EOD forces supporting civil authorities to counter a sustained IED threat in CONUS. By processing data from the five categories of sources through the D-A-I method, initial conclusions were drawn and examined through the DOTL-P analytical framework that provided conclusive results, which could answer the research questions. This systematic approach was key to transforming a mountain of qualitative data into a firm, conclusive answer to

one question: Just how well prepared are U.S. military EOD units to support civil authorities in defeating an organized, sustained IED threat in CONUS?

¹ Director, Joint Staff, Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3010.02e, *Guidance for Developing and Implementing Joint Concepts* (Washington, D.C.: August 2016), accessed March 7, 2017, http://www.dtic.mil/cjcs_directives/cdata/unlimit/3010_02.pdf, A3-A5.

² Harry F. Wolcott. *Transforming Qualitative Data* (Thousand Oaks, CA: Sage Publications, 1994), 2-59.

³ Director, Joint Staff, CJCSI 3010.02e, A-5.

⁴ Wolcott, 2-59.

CHAPTER 4

ANALYSIS

Introduction

The purpose of the following research is to adequately assess the U.S. military's ability to C2 EOD forces conducting DSCA operations in response to a sustained IED threat in CONUS. To provide sufficient support civil authorities, military EOD units must be able to integrate into a civil authority command structure through all phases of a developing IED campaign from an initial response to a planned operation involving forward deployed EOD teams. To accurately assess U.S. military EOD's ability to respond to this type of threat, research focused on answering the following research questions:

1. What is the potential for a persistent IED threat to develop in CONUS?
2. What types of individuals or groups are most likely to present an IED threat to CONUS?
3. To what extent are IEDs currently being used in CONUS?
4. How does the use of IEDs and development of IED tactics in other areas of the world present a threat to the U.S. homeland?
5. How well do existing policies, laws, doctrine, account for EOD forces providing protracted DSCA support without within a civil law enforcement task force without the establishment of a USNORTHCOM JTF?
6. What policies and strategy apply to a military DSCA response to IEDs in CONUS and how do they affect the military's ability to respond to an IED threat?

7. What laws govern the U.S. military's ability to support civil authorities as an IED campaign escalates over time and do existing laws enable or hinder the military's ability to support?
8. How well does civilian agency doctrine address the military's role in commanding and controlling a response to a prolonged IED incident?
9. How well does U.S. military and EOD doctrine address the C2 of EOD forces conducting a prolonged DSCA response mission?
10. What are the C2 requirements in terms of manning and training for EOD units in an extended DSCA support role if a JTF is not established in response to the threat?
11. What are the decision points to transition from immediate response for an initial IED incident to the establishment of a JTF as the incident escalates into a sustained IED campaign in CONUS?
12. What Doctrine, Organization, Training, Leadership, and Policy (DOTL-P) solutions are required to enable C2 of U.S. military EOD forces in response to a sustained IED campaign in CONUS?

The following analysis of the data collected to answer these questions is organized in accordance with the analysis methodology steps highlighted in chapter 3. This chapter is divided into three major sections. The first section is a content comparison within the five source categories of data collected; threat analysis, law, policy, doctrine, and practice. The purpose of this section is to draw the raw data from each major source category. The second major section of this chapter is a content comparison across the five data categories to analyze what interactions the five source categories have with each

other to produce initial conclusions that begin to answer the above research questions. The final major section of this chapter is an interpretation of the initial conclusions through the DOTL-P analytical framework as described in chapter 3 with the purpose of reaching conclusions to the research questions.

Analysis Phase 1: Source Category Content Comparison

Phase 1 Threat Analysis

The threat analysis documentation examined during this study serves two purposes. The first is to show the potential for a sustained IED campaign to develop in the United States. Establishing the potential for this threat to develop provides relevance to the study of an EOD response supporting civil law enforcement to counter a sustained IED threat. The second purpose of analyzing the CONUS IED threat is to develop initial conclusions that answer the following secondary research questions:

1. What is the potential for a persistent IED threat to develop in CONUS?
2. What types of individuals or groups are most likely to present an IED threat to CONUS?
3. To what extent are IEDs currently being used in CONUS?
4. How does the use of IEDs and development of IED tactics in other areas of the world present a threat to the U.S. homeland?

This threat analysis will answer these questions by providing the raw data that breaks down the organizations and individuals that have expressed or demonstrated the will to conduct terror attacks involving the use of explosives in the United States and any known use of bombs or explosives by those actors. Additionally, this section will provide statistical data from the BATFE on the prevalence of IED use in the United States over

the last 10 years. The overall intent of the threat analysis is to determine whether the existence of terrorist organizations and individuals willing to use explosives combined with the availability of IEDs and related materials in the United States presents the possibility of a sustained IED threat developing in CONUS.

Terrorist Threats to U.S. National Security

The raw data used to answer these questions came from a variety sources as listed in chapter 2. All sources concurred that the terrorist threats to the United States fall into two major categories, international terrorism, and domestic terrorism. For the purpose of this study, international terrorists are individuals or extremist groups based outside the United States who conduct attacks on U.S. interests at home and abroad to influence or intimidate the American people and government in furtherance of their extremist views or goals.¹ Domestic terrorists on the other hand are U.S. citizens or long term legal residents that plan and conduct terror attacks on U.S. soil without direct involvement from an international terror organization.² Domestic terrorists can be broken down into four categories; HVEs, left-wing extremists, right-wing extremists, and special interest/single issue extremists.³ The following threat analysis will examine these categories of terror threats to the United States in detail by describing each category with their specific objectives, examples, and demonstrated tactics.

International Terrorist Threats

The terrorist threat to the United States from international terrorists and terror organizations has a prolific history. A 2006 study conducted by the University of Arkansas Terrorism Research Center in Fulbright College identified at least 58 terrorist

attacks or attempted attacks conducted by international terrorists in the United States from 1980 to 2006.⁴ With continued attacks conducted by Al-Qaida through the late 2000s, this number is certainly higher now than when the University of Arkansas study was concluded in 2006.⁵ The case studies on international terrorism included in the University of Arkansas study identified the groups Hezbollah, Al-Qaida, Japanese Red Army, Omega-7, and the Provisional Irish Republican Army as having all been involved in conducting or planning terrorist attacks on targets in the United States. In the case of Al-Qaida and Hezbollah, multiple cases were presented.⁶ While the University of Arkansas study's statistical data covered the period from 1980 to 2006, the most recent of the in-depth case studies of international terrorism included in the study was the 1993 bombing of the World Trade Center in New York, an attack attributed to Al-Qaida.⁷ However, more recent sources than the University of Arkansas study seem to key in on only two international terrorist organizations as being credible threats to the U.S. homeland, Al-Qaida and ISIS also known as Islamic State of Iraq and the Levant.⁸

In 2002, four years prior to the release of the University of Arkansas study, the FBI's Executive Assistant Director for Counterterrorism and Counterintelligence, Dale L. Watson, gave a presentation to the U.S. Senate Select Committee on Intelligence where he claimed that the FBI recorded 88 incidents of international terrorism in the United States between 1980 and 2000 versus the 58 from the University of Arkansas study.⁹ However, both sources agree that international terrorism is a significant threat to U.S. national security. Watson also pointed out a significant decline in terror attacks on the United States through most of the 1990s, as suggested by the cases presented in the

University of Arkansas study, followed by a sharp increase in attacks in the late 1990s and early 2000s, mostly attributed to the rise of Al-Qaida.¹⁰

Al-Qaida is an international terrorist organization that grew out of the mujahedeen movement in Afghanistan in the 1980s where local tribes resisted Soviet occupation of Afghanistan. Osama bin Ladin and others formed Al-Qaida in 1988 at the end of the conflict as a force to protect Muslims from persecution anywhere in the world. However, bin Ladin's anger at the U.S. intervention to drive Iraqi forces from Kuwait in 1990 led him to transform Al-Qaida into a terrorist organization with the goal to drive the United States and other Western powers from the Middle East.¹¹ Al-Qaida first gained notoriety with its 1993 bombing of the World Trade Center. This attack was the first of many terror attacks on U.S. soil committed by Al-Qaida.¹² Through the 1990s and early 2000s, Al-Qaida continued to show a willingness to use explosives against U.S. targets with high profile attacks against the U.S. embassies in Tanzania and Kenya in 1998, the USS *Cole* in Yemen in 2000, and a foiled attack on the New York City's major landmarks in 1993.¹³ These attacks were followed by the September 11, 2001 attack on the World Trade Center and the Pentagon as well as the December 2011 Shoe Bomber attack where Al-Qaida operative Richard Reid tried to bring down a Paris-to-Miami flight. By the time that Dale Watson gave his annual address to the Senate Select Committee on Intelligence in February 2002, Al-Qaida was the most dangerous international terrorist threat facing the United States.¹⁴ Global anti-terrorism efforts diminished core Al-Qaida leadership through the 2000s causing a transformation of the group and its methods for planning and conducting attacks. Al Qaida became more decentralized and spawned multiple spin-off groups. The most prolific of these groups in terms of global terror threat are Al-Qaida in

the Arabian Peninsula (AQAP) and Al-Qaida in the Islamic Maghreb (AQIM). Some experts argue that this decentralization makes Al-Qaida more dangerous due to the lack of control from senior leadership and the challenge to the international intelligence community of tracking active operatives.¹⁵ In 2015, the Director of the National Counterterrorism Center, Nicholas Rasmussen, gave an address to the Senate Select Committee on Intelligence where he acknowledged the threat posed by core Al-Qaida, although the bulk of his speech addressing international terrorism focused on AQAP. Rasmussen credited AQAP with three complex terror plots against targets in the United States; all were attempts to use bombs to attack airliners and cargo planes in 2009, 2010, and 2012. He also underscored AQAP's threat to the U.S. homeland by highlighting their ability to coordinate complex attack such as the Paris "Charlie Hebdo" attack in 2015 and AQAP's ability to inspire "lone offender" attacks in Western countries through their prolific use of online propaganda.¹⁶

In addition, covered in Rasmussen's 2015 brief to the Senate Select Committee on Intelligence was a new international threat known as ISIS or ISIL. This organization grew out of decade long conflict in Iraq and took advantage of weak governments in both Iraq and Syria enabling its estimated 30,000 fighters to occupy large swaths of land in both countries. ISIS is adept at using propaganda to recruit foreign fighters, and uses its army to commit acts of terror and ethnic cleansing in Iraq and Syria in the name of Islam. As ISIS gained strength through 2014 and 2015, it began to branch out and conduct operations on a global scale. Rasmussen states that 18 acts of terrorism against western interests occurred in 2014 and 2015 including a combined vehicle borne improvised explosive device (VBIED) and small arms attack at a hotel in Tripoli. Also, mentioned in

the 2015 brief to the Senate Select Committee was ISIS's ability to reach alienated Muslims in Western countries and inspire them to commit attacks in the name of ISIS. Rasmussen also prophesized the possibility that an individual motivated by ISIS could easily conduct a limited terror attack in the United States without warning.¹⁷

The evolution of the ISIS threat becomes very evident in Rasmussen's brief to the Senate Select Committee on Intelligence the following year. His 2016 address still confirms Al-Qaida as a viable threat puts a great deal of emphasis on ISIS and their ability to inspire followers to conduct terror attacks.¹⁸ A 2016 study produced by the House Homeland Security Committee validated Rasmussen's concerns. The study shows many data points that point to ISIS as a potential threat that could execute a sustained IED campaign in the United States. The data included over 100 ISIS plots against Western countries between 2014 and 2016. The results of the study showed that 40 percent of these plots were against the United States, by far the most targeted country. The study also showed ISIS's ability to C2 attacks rather than relying on lone attackers; ISIS likely directed 47 percent of all attacks versus just inspiring them. ISIS's ability to direct attacks through the conduct of covert communications via encrypted messaging services, a tactic known as "going dark" is also alarming.¹⁹ Rasmussen echoed this concern in his 2016 brief to the Senate Select Committee on Intelligence where he said, "there are two trends in the contemporary threat environment that concern us most. First is the increasing ability of terrorist actors to communicate with each other outside our reach with the use of encrypted communications."²⁰ The House Homeland Security Committee Study also found that ISIS was increasing using explosives in their attacks as they evolved their tactics. ISIS plots involving the use of explosives rose from 11 percent

in 2014 to 47 percent in 2016.²¹ These constantly evolving tactics show ISIS's potential to evolve into a sustained IED threat in the United States.

Domestic Terrorist Threats

Homegrown Violent Extremists

The Department of Homeland Security (DHS) and the FBI define a HVE as:

A person of any citizenship who has lived and/or operated primarily in the United States or its territories who advocates, is engaged in, or is preparing to engage in ideologically-motivated terrorist activities (including providing support to terrorism) in furtherance of political or social objectives promoted by a foreign terrorist organization, but is acting independently of direction by a foreign terrorist organization.

In a technical sense, this definition is separate from the FBI's definition of a domestic terrorist.²² Most sources on the subject, however, consider HVE as subset of domestic terrorists. For simplicity's sake, this work will also consider HVEs a form of domestic terrorism, though HVEs are different from other domestic terrorist due to their loose affiliations with international terrorism. The term HVE is most commonly linked to the radical Islamic jihad movement as most sources who utilize the term HVE do so in relation to individuals who commit acts of terrorism after becoming inspired by the ideals of organizations such as ISIS.

The radicalization of Western citizens to conduct terrorist attacks against countries across the globe is an increasing threat.²³ It is difficult to pinpoint whom or what type of individual or group is most susceptible to radicalization. Demographic data on HVEs is inconclusive due to the wide disparity among individuals who, though predominately Muslim, become radicalized by identifying with propaganda from foreign terror organizations.²⁴ However, when looking at ISIS inspired HVEs specifically, 90

percent are male with an average age of 26, and 80 percent are under the age of 30.²⁵ Most HVEs tend to harbor some sort of perceived social grievance such as a lack of belonging, feelings of discrimination, or lack of personal identity. Radical Islamic terror organizations capitalize on these feelings by providing a sense of identity and belonging through the use of training camps and intense online propaganda campaigns. Though the true personal goal of an HVE may be to fill a perceived void in their life, they in effect take on the same goals and aspirations of international terror organizations.²⁶

In his 2015 address to the Senate Select Committee on Intelligence, Nicholas Rasmussen stated, “the most likely and immediate threat to the Homeland will come from Homegrown Violent Extremists (HVEs) or individuals with loose affiliation to terrorist groups overseas.”²⁷ In fact, between 2015 and 2016 there were 82 ISIS linked attacks against Western countries. A linked attack is an inspired attack not a directed attack. In 2016 alone, radicalized ISIS sympathizers conducted 53 percent of attacks against Western targets; operatives with direct links to ISIS did not conduct these attacks.²⁸ The FBI estimates that there are currently 1,000 HVEs located in the United States.²⁹

The 2013 Boston Marathon bombing, 2015 San Bernardino attack, and the 2016 New York/New Jersey bombing were all carried out by HVEs. These attacks involved the use of multiple IEDs in more than one location and demonstrate that individuals residing in the United States can be influenced or radicalized to initiate an IED campaign in the U.S. homeland by international terrorist organizations.

In the case of the Boston Marathon bombing, Tamerlan and Dzhokhar Tsarnaev, the brothers who carried out the attacks, were both long-term residents of the United States Tamerlan married a U.S. citizen, and Dzhokhar successfully completed

naturalization to become a citizen himself. However, Tamerlan who had a great influence over the younger Dzhokhar, exhibited every previously mentioned characteristic that makes someone susceptible to radicalization. He felt a profound lack of belonging to mainstream American society and suffered personal failures in terms of career success. Tamerlan turned to radical Islam to fill the voids in his life and dragged his impressionable brother along with him.³⁰ Tamerlan was inspired by readings in Al Qaida in AQAP's *Inspire* magazine and online videos of recorded speeches from AQAP cleric Anwar al-Awlaki.³¹ In fact, the information used to build the IEDs that he and Dzhokhar built came from an article in *Inspire*.³² While the brothers drew their inspiration to attack from AQAP and other jihadist groups, they were not directed by any group to carry out their attacks.³³ This attack could set a precedent for HVEs to carry out an IED campaign. The brothers detonated two bombs during the attack, but they were on their way to New York with six more bombs when they encountered police resulting in Tamerlan's death and Dzhokhar's eventual arrest.³⁴

In the San Bernardino shooting attack at Inland Regional Center in December 2015, Syed Rizwan Farook, a natural born U.S. citizen, and his wife, Pakistani born Tashfeen Malik, killed 14 people. Experts cannot accurately say when Farook and Malik became radicalized. Some suggest Farook's radicalization occurred because of his 2014 marriage to Malik, who showed signs of radical religious beliefs as far back as 2009. However, people who knew him say Farook talked about potential attacks in 2012 before he ever met Malik. Either way, Malik posted her allegiance to ISIS on social media the morning of the attack though neither Malik nor Farook had any definitive ties to any international terrorist organization.³⁵ Even though Farook and Malik did not detonate any

explosives during their attack, police officers found a cache of pipe bombs in Farook's bag in the Inland Regional Center building and potential explosive devices in their stolen vehicle following the shootout with police that resulted in their deaths.³⁶

Ahmad Khan Rahami is the latest HVE to use multiple IEDs to conduct acts of terror. On September 17, 2016, Rahami detonated two IEDs: one in Seaside, New Jersey and another in the Chelsea neighborhood of New York City that seriously wounded 31 people. On the same day, Rahami placed another bomb on a street in Chelsea and one at a train station in Elizabethtown, New Jersey. The second bomb in Chelsea did not detonate, and the bomb in Elizabethtown detonated when a police bomb squad robot attempted to inspect the device.³⁷ Details of Rahami's radicalization are not clear. However, a notebook in his possession during his arrest contained many ramblings praising ISIS and AQAP's Anwar al-Awlaki.³⁸

Left-wing Terrorist Groups

The FBI characterizes left-wing terrorism as the use of violence to bring about social change. Left-wing terrorists usually possess a revolutionary socialist view and see themselves as righteous protectors seeking to free the people from the oppression of capitalism and imperialism.³⁹ Though still very prevalent internationally, left-wing terrorist activity in the United States reached its peak from the 1960s through the 1980s.⁴⁰ In the University of Arkansas study, data identified 51 terror attacks positively attributed to left-wing terror organizations. The overwhelming majority of these attacks occurred from the late 1960s to the early 1990s.⁴¹ Most credit the decline in left-wing terrorism in the United States to law enforcement efforts in the 1980s and the fall of communism in the Soviet Union discrediting left-wing ideals.⁴²

Two of the more notable left-wing terror groups in U.S. history that were known for using IEDs in terror attacks are the M19CO and United Freedom Front (UFF). M19CO sprang out of a student movement in the 1960s and is known to have worked closely with other left-wing terror groups including the United Freedom Front and the Black Liberation Army. M19CO chose its name as a celebration of the shared birthdays of Malcolm X and Ho Chi Minh, March 19th. The goal of M19CO's operations was to free violent activists that they viewed as political prisoners and start a bombing campaign that would initiate a working-class revolution in the United States. Official reports credit M19CO with eight bombings between January of 1983 and February 1985. Targets included the U.S. Capitol building, Army War College, and the South African consulate in Washington, D.C. No one was injured in the bombings. Experts suspect M19CO probably conducted many more bombings, but investigators found difficulty determining an exact number due to M19CO's close working relationship with other terrorist groups. It is likely that M19CO did carry out more than eight bombings, and they certainly were planning more. One arrest involving two M19CO members netted 100 blasting caps, 200 sticks of dynamite, and 100 gel explosive charges.⁴³

The UFF was an organization started in the 1970s by two Vietnam War veterans. The group opposed the U.S. government, corporate imperialism, South African apartheid, and U.S. involvement in South American countries (which it saw as a form of imperialism). In all, UFF conducted 19 bombing attacks from April of 1976 to September of 1984 mostly against government, military, and corporate facilities.⁴⁴

As alluded to by the director of the FBI's Counterterrorism Center in 2002, left-wing terrorism has been only a minimal threat to homeland security since the 1980s.⁴⁵ Other research supports this claim, particularly the University of Arkansas study.

Right-wing Terrorist Groups

Right-wing terrorist threats fall into one of three different categories, White supremacists, fundamentalists, or anti-federalists. White supremacy groups seek to uphold what they perceive as the natural world order of racial hierarchy and exert control over non-Aryan races. They oppose any individual or organization, including governments, that they perceive as showing favoritism to non-Aryans or trying to degrade the power of the Aryan race. Specific groups associated with this ideology that have showed willingness to conduct acts of terrorism include The Order, Neo-Nazi (Skin Head) groups, and the KKK. The KKK is perhaps the most well-known and prolific; it currently numbers at approximately 150 branches between the core group and its various spin-offs. However, the Neo-Nazi movement has proven the most likely to engage in violence, especially mass casualty events.⁴⁶

Fundamentalist groups, also known as Christian Identity groups, merge white supremacy with radical fundamentalist interpretations of religious text creating an ideology that Anglo-Saxons are the chosen people of God. Fundamentalist doctrine teaches a division of the world based on race and nationalism where Aryans or Anglo-Saxons are supreme.⁴⁷ Groups in this category include The Aryan Nation; Covenant, Sword, and Arm of the Lord; and the Army of God.

The anti-federalist movement, also known as militia or sovereign citizen movement, seeks to undermine the authority and legitimacy of the federal government.

Most of these groups believe that the true American government was infiltrated by foreign powers and replaced with an illegitimate government that seeks to oppress the rights of the American people. Anti-federalists believe the government to be corrupt and tyrannical. Therefore, most activity by anti-federalist groups is directed towards the federal government or law enforcement.⁴⁸ The Michigan Militia and West Virginia Mountaineer Militia are notable groups in this category who have been loosely associated with terrorist activities.

Presently, right-wing terror groups generate the most concern of all terrorist threats in the eyes of local law enforcement across the country. In a recent survey of 382 law enforcement agencies across the United States, 74 percent of the agencies listed right-wing terrorism as their top terrorism concern.⁴⁹ The University of Arkansas study identified 41 terrorist attacks conducted by right-wing groups in the United States between 1980 and 2003.⁵⁰ Additionally, a 2015 study conducted by the Triangle Center for Terrorism and Homeland Security at Duke University found that right-wing extremists were responsible for 65 terror attacks in the United States from 2001 to 2013 resulting in 17 fatalities as opposed to only 24 confirmed attacks by Islamic idealists during the same timeframe.⁵¹ This data not only shows that right-wing groups are the most active terrorist threat, but that their activity has increased by 50 percent in the last decade over activity from the previous two decades.

Right-wing groups have also shown the use of IEDs as a key tactic in their terror tactics. The Countering Terrorism Center at the U.S. Military Academy at West Point conducted a study in 2012 that found 9 percent of attacks conducted by right-wing terrorists between 1990 and 2012 included the use of explosives.⁵² This percentage

increased considerably when looking specifically at militia or anti-federalist groups, who used explosives in 68 percent of their attacks.⁵³ The University of Arkansas study also found a prolific use of IEDs by right-wing activists. Of the 17 case studies involving right-wing groups in the report, 11 involved the use of IEDs or explosives.⁵⁴ The study also found that right-wing terrorists were more likely to travel long distances to conduct their attacks, 21 percent of right-wing terrorist in the study travelled over 700 miles from their home to conduct their attack.⁵⁵ This willingness to travel suggests that right-wing terrorists may be more likely than other groups to initiate a wide spread IED campaign.

The most notable attack by right-wing activists using explosives is the April 19, 1995 bombing of the Alfred P. Murrow federal building in Oklahoma City carried out by Timothy McVeigh and Terry Nichols that killed 168 people. McVeigh and Nichols, who both harbored deep resentment and distrust of the federal government, used a rental truck with 7,000 pounds of explosives in their attack.⁵⁶ Most recently, in October 2016, three men from Kansas belonging to a fundamentalist group known as The Crusaders were arrested with a stockpile of weapons, explosives, and plans to build four VBIED to use in an attack on a Somali mosque in Garden City, Kansas.⁵⁷

Special Interest Terrorism Threats

The FBI defines special interest terrorists, also known as single-issue terrorism, as individuals who use violence in an attempt to force social or political change on a specific issue. Special interest terrorism differs from right-wing and left-wing terrorism in that special interest terrorists are only concerned with one issue rather than with social revolution or overthrow of an entire government system.⁵⁸ This definition makes it difficult in some cases to determine the difference between special interest terrorism and

left or right-wing terrorism because special interest terrorists often use issues found in the beliefs of left or right-wing groups as the motivation for their attacks. For example, animal rights, environmental protection, and anti-abortion are common platforms for special interest terrorists.⁵⁹

The most common special interest groups known to use terror tactics are the Animal Liberation Front (ALF) and the Earth Liberation Front (ELF). ALF formed in the late 1970s with the goal to end cruelty to animals around the world and inflict damage on any operation or individual who profits from the exploitation and torture of animals. They claim to have participated in thousands of animal rights activities in the past two decades but monitoring ALF related activity is difficult because there is no formal association process for the group. Members simply adopt the ideals of ALF and conduct operations autonomously, like HVEs and international terrorist organizations. This loose association creates difficulty for law enforcement to positively attribute activities to the group itself.⁶⁰ ELF operates almost identically to ALF except they profess the protection of the environment from pollution and destruction by industry and governments as their platform.⁶¹

Most special interest terrorists use sabotage, arson, and other forms of violence in their attacks. Use of explosives by special interest terrorists is rare, but it does occur. In the 14 case studies on special interest terrorism in the University of Arkansas study, only three used explosives. One incident involved three loosely affiliated ALF members who used a bomb to blow up a commercial fur-breeding cooperative in Sandy, Utah in March of 1997. No one was injured in the attack.⁶² Another incident involved an ELF member who conducted two separate attacks involving 12 IEDs to destroy gravel trucks, log

trucks, and heavy equipment at businesses in Oregon in May and June of 2001. Again, no one was injured in either of the attacks.⁶³ The most notable use of explosives by a special interest terrorist is the case of Theodore Kaczynski, The Unabomber. Kaczynski, a Harvard graduate with a genius IQ, lived a hermit life in a small cabin outside Lincoln, Montana. He was adamantly anti-technology and targeted college professors, industry professionals, and an aircraft in his attempt to stop the world from developing and using new technology. Over the course of 17 years, from May 1978 to April 1995, Kaczynski conducted 16 bombings killing three and wounding 22.⁶⁴

IED Use in the United States

Aside from understanding the variety of terrorist threats that have shown the will and ability to use IEDs in the United States, one must look at historical data on IED use in the United States and implications for the future to understand the potential for a sustained IED campaign to develop. If the previously discussed incidents regarding IED use in the United States are not convincing enough, data from the BATFE's USBDC certainly supports the assumption that an IED campaign could develop in the United States. In its 2014 annual EIR, the USBDC reported 642 bombings in the United States for 2014. IEDs comprised 152 of those bombings; the remainder included over pressure devices, pyrotechnics, fireworks, and other unmodified explosives not classified as IEDs. IEDs made up 24 percent of all bombing but accounted for 75 percent of all bombing deaths in 2014. More alarming, the USBDC touts 2014 as the lowest number of explosive incidents since 2010 and a 21 percent drop from 2013 to 2014.⁶⁵ The 2015 USBDC annual report confirms the decreasing trend of IED use in the United States with only 400 bombings, 112 of which were IEDs.⁶⁶ Regardless of the downward trend both reports

show that IED use and the supplies and knowledge to make them currently exist in the United States.

The cases of the Tsarnaev brothers and Ahmad Khan Rahami support the notion that the knowledge and materials to produce and employ IEDs exist in the United States. The Tsarnaev brothers certainly got their idea for the pressure cooker bombs used in the Boston Marathon Bombing from AQAP's *Inspire* magazine, which is available to anyone with an internet connection. Ahmad Khan Rahami used a very similar construction in his bombs used in New York and New Jersey. Given his documented affinity for AQAP and Anwar al-Awlaki, it is probable that Rahami got his inspiration from the same source.

DHS authorities feared that the use of pressure cooker style IEDs would migrate to the United States as early as 2004, 10 years before the Tsarnaev brothers' attacks.⁶⁷ In a 2014 *The National Interest* article written in the wake of the Boston Marathon Bombing, Bruce Hoffman asserts that it is not surprising to see IED tactics migrate from terror-stricken countries such as Iraq and Afghanistan due to the effectiveness of the devices and their relatively low cost. To highlight the effectiveness to cost ratio, Hoffman points out that the device used in the 1993 World Trade Center Bombing cost about \$400 to build, but it killed six people and caused \$550 million in damages and lost revenue. Similarly, the device used by AQAP operatives to attack the USS *Cole* in Yemen cost \$10,000 to build and employ but killed 17 U.S. service members and caused \$250 million in damage to a U.S. warship.⁶⁸ With proven results such as these, why would terrorists not spread these tactics to every theater of their operations?

Phase 1 Threat Analysis Raw Data Summary

The content comparison of sources related to the threat analysis allows for the formation of conclusions about the potential threat of an IED campaign developing in the United States. The United States has a wide variety of terrorist organizations and individuals both international and domestic with motives including radical jihadism, right and left-wing extremism, and a host of individual special issues. All have shown a willingness and capability to utilize IEDs in furtherance of their ideals. USBDC information proves that the knowledge and materials necessary to build and employ IEDs exists in the United States. They have recorded hundreds of IEDs over recent years. Case examples such as the Tsarnaev brothers and Ahmad Khan Rahami show that some bombers have attempted to use IEDs on multiple targets over a multi-jurisdictional area. Theodore Kaczynski was a one-man IED campaign, although he spread his attacks out over a 17-year period. These bombers were isolated cases who acted alone, but increased use of social media and encrypted communications by terror organizations, as previously discussed, have the potential to aid in the coordination of like-minded individuals. The result could be a coordinated IED campaign with multiple bombers, multiple targets, and a network that can help in evasion from capture and sustainment of IED materials over a prolonged time. This Phase 1 analysis of threat analysis data answers the following secondary research questions:

1. What is the potential for a persistent IED threat to develop in CONUS?

Potential certainly exists. There are enough terror groups and individuals with the willingness and capability in the United States. Everything needed to build and employ IEDs in the United States is available for these threats to use. Lastly, new technologies

are developing to allow for coordination of efforts outside the watchful eye of law enforcement and intelligence assets.

2. What types of individuals or groups are most likely to present an IED threat to CONUS?

International terrorist groups and domestic terrorists including HVEs, right-wing extremists (white supremacy, anti-federalists, and fundamentalists), left-wing extremists, and various special interest terrorists have all shown a willingness to use IEDs. However, use of IEDs proved more prevalent among international terrorists, HVEs, and right-wing extremists, particularly anti-federalists.

3. To what extent are IEDs currently being used in CONUS?

The use of IEDs in the United States was in a downward trend through 2014 and 2015. Data for 2016 is not currently available. Despite the downward trend, IEDs are still frequently used in the United States with 112 confirmed incidents in 2015 by the USBDC.

4. How does the use of IEDs and development of IED tactics in other areas of the world present a threat to the U.S. homeland?

Lessons learned from the successful use of IEDs in other areas of the world are easily shared through the use of modern communications and could affect the use of IED in the United States. The Tsarnaev brothers certainly used proven tactics, techniques, and procedures (TTPs) from Iraq and Afghanistan printed in AQAP's *Inspire* magazine to build their bombs.

Legal Analysis

Knowledge of the national laws applicable to the type of military EOD response being examined in this project is helpful to fully understand how law fits with national policy and ultimately shapes military and EOD specific policy and doctrine. The purpose of this section is to examine national law applicable to a long-term DSCA response to set a baseline of comparison for later examination of policy and doctrine. A legal baseline will allow for a cross comparison of all three categories to assess concurrency in all categories. To establish the legal baseline, this section will show the results of the Phase 1 content comparison analysis as described in chapter 3. Additionally, this review will show the authorities and limitations placed on military EOD support to a sustained IED campaign in a DSCA role. A thorough review of raw data from this section will answer the following secondary research question: what laws govern the U.S. military's ability to support civil authorities as an IED campaign escalates over time and do existing laws enable or hinder the military's ability to support?

For the purposes of clarity and succinctness, the laws examined in this section have been scoped to only those with particular influence on EOD support in a DSCA environment. Laws that are common to any DSCA mission such as parts of the Stafford Act, the Economy Act, and the Insurrection Act, are not examined here, though they still apply. Likewise, laws that apply to any EOD response, DSCA or otherwise, such as the Military Munitions Rule and Code of Federal Regulation 49 regarding transportation of hazardous materials, are not included.

The first law that is highly important to military EOD units responding to incidents during an IED campaign is Title 42 USC, Section 5192, Federal Emergency

Assistance. This law is the portion of the Stafford Act that grants DoD commanders IRA to provide federal assets to assist civil authorities in imminent situations to prevent loss of life, end human suffering, or prevent major damage to property.⁶⁹ Section 5192 gives military EOD units the authority to conduct their normal operations providing timely assistance to civil law enforcement. Military EOD's initial involvement in an IED campaign will most likely begin with one or several response missions under IRA as the threat begins to emerge and develop. The transition from this initial response to a sustained supporting effort assisting civil authorities is the overall subject of this research project and key to answering the primary research question.

Depending on the situation, Title 42 USC, Section 5191 may also become relevant as an IED campaign develops. This section of the Stafford Act requires states to send a formal request through a declaration of a state of emergency for federal assets to respond to emergency situations outside of IRA criteria.⁷⁰ Though Title 42 does not place a time restriction on IRA, DoD policy laid out in DoDD 3025.18 sets a 72-hour time limit for a reevaluation to determine whether IRA still applies, or if a formal request is needed to continue providing support to civil authorities.⁷¹ There is potential for a state to request federal military EOD assets once the determination has been made that a prolonged response exceeding 72 hours is required to counter a sustained IED threat.

However, if an IED campaign is identified and determined to be a terrorist act, a formal request for federal assets from the state will most likely not be required. Title 18 USC, Section 2332f grants jurisdiction for any terrorist related attack to the federal government.⁷² Therefore, a response to a terrorist IED campaign is automatically a federal response mission with federal law enforcement as the lead agency. Any U.S.

military EOD assets required for this response would come through a request from the DHS to the DoD for assistance. Thus, military EOD support during a terrorist IED campaign would be a DSCA mission in support of federal law enforcement efforts.

As with any other military operation, DSCA or otherwise, Title 10, USC, Armed Forces applies. Title 10 USC regulates all activities undertaken by U.S. forces including active duty, activated reserve forces, and federalized National Guard forces.⁷³ Sections 271, 275, 276, and 283 are particularly important for U.S. military EOD units serving in a DSCA role to counter an IED campaign in the United States.

Section 271, Title 10 USC is key for military EOD assets supporting law enforcement to understand. This law states that any information gained during military operations or training that is “relevant to drug interdiction or other civilian law enforcement matters is provided promptly to appropriate civilian law enforcement officials.”⁷⁴ This means that any information obtained by military EOD teams during response missions to render safe explosive hazards must be quickly compiled and provided to law enforcement. This law would apply directly, requiring timely and accurate reports from EOD teams with information on device construction and employment tactics to be produced for law enforcement as soon as possible. The legal requirement to promptly provide this information to law enforcement could be an argument for a military EOD C2 element located within the civil authority command structure to serve a liaison function for teams in the field. The C2 element could collect reports from the EOD teams, conduct a technically competent analysis of the report, make necessary corrections, and prepare a final product for immediate release to law enforcement. If the C2 element has delegated release authority for reports rather than

having to send reports through a higher command, it could shorten the time needed to release information to law enforcement.

Also, Section 283, Title 10 USC entitled Situations Involving the Bombing of Place of Public Use, Government Facilities, Public Transportation Systems, and Infrastructure Facilities prohibits federal military forces, including EOD forces, from making any arrests or collecting evidence from any bombing incident in the United States unless in immediate protection of human life.⁷⁵ Evidence collection is a mainstay of U.S. military EOD operations outside of the United States, but in a DSCA scenario, a law enforcement official must collect and process all evidence after EOD has cleared the scene of explosive hazards.⁷⁶ This law applies to all DSCA support including the current missions conducted by EOD in support of local authorities under IRA. In a potentially hectic environment like a sustained IED campaign, an EOD C2 element may be necessary to coordinate with a civil law enforcement task force to ensure trained evidence technicians are available to process incident sites after military EOD teams have cleared them of explosive hazards.

An EOD C2 element inside a civil authority CP could also help prevent military EOD teams from violating the laws of the Posse Comitatus Act. Codified in Title 18 USC, Section 1385, the Posse Comitatus Act prevents federal military personnel from enforcing any laws in the United States unless permitted to do so by the Constitution of the United States or authorized by Congress.⁷⁷ This law prohibits military EOD teams from restricting access or enforcing a cordon of any type around active incident sites to protect themselves or members of the public while explosive hazards are still present. Therefore, civil law enforcement must respond and effectively cordon any area with a

known or suspected explosive hazard. An EOD C2 element embedded in a civil authority CP could help ensure a coordinated effort between law enforcement and EOD teams, especially if multiple scenes and incidents are active at the same time.

Phase 1 Legal Analysis Raw Data Summary

National law permits the use of U.S. military EOD teams for an extended DSCA response to an IED campaign in the United States. All titles of USC apply to EOD forces during a DSCA mission as they would with any other unit serving in a DSCA role. However, there are some specific laws that have a direct impact on EOD DSCA operations. IRA outlined in the Stafford Act permits EOD commanders to respond to requests for support from civil authorities without waiting for approval from a higher chain of command. However, DoDD 3025.18 places a 72-hour limit on this permission. At that point, commanders must conduct a reevaluation of the mission to determine if IRA still applies or if a request for support from the state government or another federal agency is required for continued support. Title 18 USC grants jurisdiction for all confirmed terror attacks to the federal government. As an EOD campaign escalates from initial response to a verified terrorist bombing campaign. EOD teams providing DSCA support may have to transition from immediate response to assist local civil authorities to sustained operations within a federal task force. The Posse Comitatus Act and Title 10 USC place limitations on EOD DSCA operations that are not present during normal contingency operations outside the U.S. EOD teams cannot collect or process evidence from devices that they render safe and must work closely with law enforcement to ensure the safety of personnel on an incident site. Title 10 also requires timely and accurate reporting from EOD teams performing DSCA operations in the field. EOD units should

rapidly process incident reports for dissemination to law enforcement. This raw data produced from the Phase 1 legal analysis answers the following secondary research question: what laws govern the U.S. military's ability to support civil authorities as an IED campaign escalates over time and do existing laws enable or hinder the military's ability to support?

All titles of USC apply to EOD or any other unit providing DSCA support. Title 10, Sections 271 and 283; Title 18, Sections 385 and 2332f; and Title 42, Sections 5191 and 5192; have a more direct influence on EOD operations than other military operations in a DSCA environment. These laws enable U.S. military EOD units to conduct prolonged DSCA operations in response to an IED campaign in the United States, but with some restrictions.

Policy and Strategy

The purpose of this section is to examine policy and strategy related to DSCA operations and CIED efforts. The study of policy and doctrine provide an understanding of how the highest levels of leadership with the U.S. government shape military doctrine and operational planning. Objectives set forth in national policy and strategy ultimately shape military doctrine and operations aimed at accomplishing the stated objectives. Raw data gained from the study of national policy and strategy will answer the following secondary research question: what policies and strategy apply to a military DSCA response to IEDs in CONUS and how do they affect the military's ability to respond to an IED threat?

For both DSCA and countering IEDs, policy and strategy begin at the highest levels of the government and trickle down. Policy and strategy necessarily begin with

vague guidance and become more detailed as that guidance filters down to the lower levels of government tasked with the actual execution of policy and strategy. As one will see, for example, vague guidance from the president on defense of the U.S. homeland becomes more detailed at the DoD level and much more detailed at the USNORTHCOM level. Added detail allows for the development of military doctrine and operational planning to accomplish the president's objectives.

In February 2013, President Barak Obama signed a directive titled *Countering Improvised Explosive Devices*. The purpose of this directive was to establish the nation's priorities in relation to CIED efforts. The three main objectives of the policy were:

1. Leveraging, integrating, and aligning U.S. government efforts.
2. Enhancing the focus on protecting American lives.
3. Promoting cooperation with governmental, international and private sector partners.⁷⁸

The policy lists eight ways for accomplishing the policy objectives. One of these ways is "enhancing our operational planning." Listed under this method are three goals:

1. Developing an operational plan for a domestic or transnational IED threat.
2. Enhancing counter-IED preparedness planning for Federal, state and local response.
3. Evaluating and reporting annually on interagency progress.⁷⁹

Though President Obama's policy does not directly state that DoD assets should improve integration with local law enforcement and train to counter an IED threat in the Homeland, it certainly does imply that intent. President Obama reinforces this intent in his conclusion to the directive, which states that a "whole-of-government" approach is necessary to protect the U.S. homeland from the threat of IEDs, implying DoD

involvement as well.⁸⁰ This directive is still the national government's standing policy on countering IEDs. The newest administration has yet to publish any guidance, which supersedes or contradicts President Obama's 2013 directive.

This air of cooperation and "whole-of-government" approach is also present in the latest NSS published by President Obama's office in 2015. This strategy sets the "principles and priorities for the use of American power" for all other government organizations to follow.⁸¹ This strategy lists the issues of top national interest as seen by President Obama. The first national interest listed is "the security of the United States, its citizens, and U.S. allies and partners."⁸² The pervasive whole-of-government theme and the criticality of securing the United States and its citizens suggest that close coordination of military EOD with a civil law enforcement task force to counter a sustained IED threat in the U.S is a consideration of vital national interest.

One step down from the NSS on the ladder of government policy and strategy hierarchy is the NMS published by the office of the Secretary of Defense (SECDEF). The purpose of this document is to communicate how the DoD will employ its forces to "advance the national interests" laid out in the NSS.⁸³ Though the NMS shows that the SECDEF believes countering terrorism and DSCA operations are a vital piece of the DoD mission, these mission sets do not rank high on DoD's Joint Force Prioritized Mission List. In fact, counterterrorism ranks number five of 12 prioritized missions, and DSCA ranks number 11.⁸⁴ The NMS prioritizes DoD efforts on global engagements with allies and missions that stop threats to national interests before they reach American shores.⁸⁵ Most interoperability and cooperation concerns addressed in the NMS relate to issues with other allied nations and within the joint force. Interagency collaboration and

interoperability are present in some sections but not as prevalent as in the NSS or President Obama's directive on countering IEDs.

On the other hand, DoD has published a number of directives or policy letters pertaining to DSCA support, some specifically relating to EOD DSCA operations. DoD Manual 3025.01, Defense Support of Civil Authorities: DoD Incident Response, a two-volume policy letter last published in August 2016, provides an extremely detailed overview of the general DSCA support mission of DoD.⁸⁶ Another directive concerning DSCA is DoDD 3025.18, Defense Support of Civil Authorities (DSCA), as discussed during the Phase 1 Analysis Legal Review. This policy published in September 2012 translates the laws of the Stafford Act, also discussed in the previous legal review, into DoD policy governing DSCA response for all federalized military assets. This directive is also the policy that grants IRA, with restrictions, to allow EOD units to respond to requests for support from civil authorities without approval from a higher headquarters.⁸⁷ DoDD 3025.18 is important to the EOD DSCA mission, but DoDD 3025.21, Defense Support of Civil Law Enforcement Agencies, may be the most important policy published by DoD in relation to EOD DSCA support.

DoDD 3025.21, Enclosure 5, is dedicated solely to EOD support to civil authorities. This enclosure contains several key points that would come into play during a prolonged EOD response to counter an IED campaign in the United States. It establishes that requests for response under IRA will be supported by the closest EOD unit, regardless of branch of service.⁸⁸ Thus, whichever Army, Marine Corps, Navy, or Air Force unit is closest to the incident must respond, if possible. This part of the policy increases the likelihood that an EOD response to an IED campaign could become a joint

operation. In the initial confusing hours of an incident, local authorities may not know where the closest military installation with EOD assets is located, and multiple jurisdictions may be requesting support from different installations. Additionally, if a C2 element is required, the closest installation may not have the personnel to serve that function. This is especially true for Air Force or Marine Corps units, which do not have EOD headquarters above the flight/company level.

DoDD 3025.21 also points out the requirement for SECDEF approval for all non-immediate DoD EOD support missions.⁸⁹ This requirement is in concurrence with the Title 42 legal requirement for all missions not covered under IRA.⁹⁰ DoDD 3025.21 uses the examples of post-blast analysis, use of DoD materiel and equipment, and support of pre-planned events as “non-immediate” missions requiring EOD support, but the 72-hour threshold for IRA in DoDD 3025.18 almost certainly applies in this instance as well.⁹¹

Additionally, DoDD 3025.21 charges combatant commanders to maintain situational awareness of EOD elements supporting civil authorities and consolidate incident reports.⁹² This means that USNORTHCOM is responsible for tracking EOD operations in the United States. In normal responses conducted under initial response authority, these reports would filter through an EOD unit’s normal chain of command which belongs to the respective services’ force providing commands such as Army’s Forces Command (FORSCOM). In the case of a response to an IED campaign, priority for reports may require faster reporting. A direct link, in the form of an EOD C2 element, from EOD teams responding in the field to USNORTHCOM’s Joint Forces Land Component Command (JFLCC), U.S. Army North (ARNORTH) could decrease the time needed to produce accurate reporting on IED incidents.

Phase 1 Policy and Strategy Analysis Raw Data Summary

Officials at the highest levels of the U.S. Government including the President and SECDEF concur that security of the U.S. homeland and its citizens are a top priority and that a whole-of-government strategy is the key to success. This strategy applies to DSCA operations in general, but the same whole-of-government rhetoric is also used specifically in the President's directive for countering IEDs. This strategy suggests an expectation that military EOD forces would participate in countering a sustained IED campaign in CONUS, should one develop, through the conduct of DSCA operations. Though this type of support is not high on the DoD's Joint Forces Prioritized Missions List, DoD recognizes that military EOD DSCA operations are a vital piece to homeland security. Therefore, DoD published policy guidance in DoDD 3025.21 specifically related to the conduct of EOD operations in support of law enforcement in the United States in addition to published guidance on the conduct of DSCA support in general. The specific guidance for EOD in DoDD 3025.21 sets the stage for possible joint EOD operations if a large-scale protracted response is necessary to counter an IED campaign. Additionally, this guidance charges USNORTHCOM with tracking EOD operations and reporting. An assumption is that EOD units providing DSCA support during a high-profile event such as an IED terror campaign would need a C2 link to USNORTHCOM. These requirements could help make the argument that EOD units must be prepared to execute C2 operations within a civil authority task force as an IED campaign escalates from an initial response to a full-on campaign until civil authorities no longer need support or USNORTHCOM assumes C2 by establishing a JTF headquarters.

Research showed that there is no DoDD that consolidates policy directives pertaining to EOD DSCA response and applies them to the joint force. The policy guidance related to EOD DSCA response exists in multiple documents such as DoDD 3025.18 and 3025.21. There is no DoD directive that governs EOD response in CONUS and consolidates legal and policy guidance related to CONUS response for the EOD joint force.

This raw data collected through a content comparison of presidential and DoD policy and strategy answers the following secondary research question: what policies and strategy apply to a military DSCA response to IEDs in CONUS and how do they affect the military's ability to respond to an IED threat?

Presidential policy guidance on countering IEDs, the NSS, and the NMS all concur that a whole-of government approach is essential to protecting the U.S. homeland from IEDs and suggest that U.S. military EOD assets would be involved in a DSCA response to counter an IED campaign in the United States. Specific DoD policy guidance found in DoDD 3025.21 lays out requirements that would apply to USNORTHCOM during an IED campaign response in the United States. These requirements call for USNORTHCOM to provide mission oversight and reporting of EOD operations. Therefore, EOD teams conducting operations need a direct link to USNORTHCOM through either an EOD C2 element or a USNORTHCOM JTF headquarters if one is established.

Doctrine

This section provides an analysis of both military and civil emergency response doctrine. Each of these sections is divided into subsections. The military doctrine section

is divided into two subsections, DSCA doctrine and EOD doctrine. Each subsection of military doctrine begins with joint force doctrine and subsequently highlights any single service doctrine that is more specific, more restrictive, or adds additional information not covered in joint doctrine. It is understood that generic DSCA doctrine applicable to any DSCA operation applies. Likewise, EOD doctrine that applies to any EOD operation is still relevant, even if not addressed in this doctrine analysis. In other words, this section of the doctrine analysis examines where in military doctrine DSCA operations and EOD operations cross paths in relation to C2 practices and principles and what implications their interaction have on the U.S. military's ability to respond to an IED campaign in CONUS.

Civil emergency response doctrine is also divided into two subsections. The first covers emergency response C2, specifically the NRF, NIMS, and the Incident Command System (ICS). The second is FBI and BATFE specific doctrine related directly to emergency response to a bombing or explosive hazard. For each subsection only portions of doctrine that directly apply to EOD support for an extended IED campaign are covered. The raw data captured in the Phase 1 Doctrine Analysis will help answer the following secondary research questions:

1. How well does U.S. military and EOD doctrine address the C2 of EOD forces conducting a prolonged DSCA response mission?
2. How well does civilian agency doctrine address the military's role in commanding and controlling a response to a prolonged IED incident?

Military Doctrine

DSCA Doctrine

JP 3-28 is the highest level of U.S. military doctrine concerning DSCA operations. JP 3-28 covers the entire gambit of DSCA operations from legal considerations to command structure and much more. Most of JP 3-28 deals with the conduct of DSCA mission in general, but some parts have a direct impact on EOD DSCA operations in response to an IED campaign in the United States. JP 3-28 establishes DSCA as an inherently joint mission.⁹³ Given the assumed threat of an IED campaign across multiple jurisdictions, there is potential that more than one service could commit EOD assets to the same operation during an IED campaign. Any C2 element overseeing EOD DSCA support in this situation should be able to C2 teams from more than one armed service in a complex and dynamic environment.

JP 3-28 recognizes the complexity of large-scale DSCA responses. As such, in keeping with PPD-8, JP-3-28 adopts the NRF, NIMS, and the ICS to the joint force. The adoption of the NRF and NIMS helps ease confusion and increase interoperability and coordination for all emergency response personnel. These systems are the operational frameworks that guide emergency response across all levels of government: local, tribal, state, and federal.⁹⁴ NRF prescribes a “tiered response” approach to all emergency situations with a focus on handling emergencies and disasters at the lowest level possible and increasing assets as the scale of the problem grows.⁹⁵ This ideal could come into play in an escalating IED campaign. NIMS establishes common terminology, incident reporting criteria, communication methods, and prescribes a unified command structure for emergency response.⁹⁶ Each system will be discussed in further detail during the

analysis of civil emergency response doctrine. It is important to recognize JP 3-28's adherence to these systems because DoD personnel operating in a DSCA environment must understand their role in NRF and how to execute emergency response in accordance with NIMS to successfully integrate with and support a civil authority task force.

Another key part of JP 3-28 that could have a significant effect on EOD forces responding to a sustained CIED effort in the United States is the portion that discusses requests for assistance (RFA). This section says that any forces committed under an RFA fall under command of the combatant commander, USNORTHCOM for operations in the United States, and USNORTHCOM can further delegate command.⁹⁷ An RFA would only apply to EOD forces deployed forward of their home station or conducting operations longer than the 72 hours granted under IRA. In fact, Army Technical Publication 3-28.1; a multi-service publication applying to Army, Navy Marine Corps, and Air Force; contains a section on EOD DSCA operations and uses a CONUS bombing campaign as an example of a situation that could require an RFA for EOD support.⁹⁸ This means that there is potential that EOD forces supporting civil authorities during an IED campaign would not fall under the C2 of their parent organization.

USNORTHCOM's command authority over RFA acquired forces granted by JP 3-28 can be delegated. USNORTHCOM would most likely delegate command authority of EOD forces to ARNORTH as the JFLCC. The JFLCC commander, in turn, has a couple of options to establish a command structure for a DSCA response. The first is to establish a JTF under either a Title 10 active duty commander or under a National Guard Title 10/Title 32 Dual Status Commander, if National Guard assets are involved in the operation.⁹⁹ If ARNORTH decides that the situation does not warrant a JTF, command

authority can be delegated to the DCO for the effected Federal Emergency Management Agency (FEMA) region.¹⁰⁰

As this research project is concerned with the escalation of an IED campaign prior to or without the establishment of a USNORTHCOM JTF, there is potential that EOD forces in this situation could fall under the command of a DCO. DCO is an O-6 level position assigned to ARNORTH but physically located in each of the ten FEMA regions. The DCO with a small staff element, a Defense Coordinating Element (DCE), is the DoD contact to advise civil authorities on defense support and process RFAs.¹⁰¹ JP 3-28 describes the DCO's command and control authority as "limited."¹⁰² Army Doctrine Reference Publication (ADRP) 3-28, Chapter 3 states that when directed by the commander of USNORTHCOM, the DCO can exercise tactical control (TACON) of DSCA forces.¹⁰³ However, ADRP 3-28, Chapter 1 says the DCO would exercise operational control (OPCON).¹⁰⁴ If ADRP 3-28 is correct in saying TACON, then the DCO could provide EOD forces with a link to USNORTHCOM for reporting and tasking purposes, and still allow for EOD forces to maintain a command relationship their parent organization. However, the DCE has no assigned EOD personnel and would most likely need augmentation from an EOD C2 element to assist with technical advice, processing EOD reports, and submitting RFA for additional EOD assets, if needed.¹⁰⁵

EOD Doctrine

JP 3-42, *Joint Explosive Ordnance Disposal* is the base doctrine for EOD operations in the joint force. This document provides general guidance for EOD missions across the range of military operations including contingency operations and domestic response missions in the United States. In discussing operations in CONUS, JP 3-42

provides an adequate review of applicable laws and military DSCA doctrine and their relation to EOD support to civil authorities.¹⁰⁶ EOD team members and leaders can use JP 3-42 as a reference for the legal authorities and tenets of DSCA operations when planning a response in support of civil authorities. JP 3-42 also provides a detailed explanation of IRA from DoDD 3025.18 and its effect on the EOD DSCA mission. Additionally, JP 3-42 explains the RFA process for EOD DSCA missions that fall outside of IRA authorities. In fact, JP 3-42 offers a suggested decision point to initiate an RFA that is not covered in DoDD 3025.18 or JP 3-28. JP 3-42 recommends consideration of an RFA as a situation evolves or grows in scope and scale to a point where immediate response forces can no longer accomplish the mission without assistance.¹⁰⁷ This is an interesting point to consider and could be very pertinent to a rapidly developing IED campaign. The RFA may need to be initiated prior to the 72-hour mark set in DoDD 3025.18 or before the decision is made to forward deploy additional teams for staging. If so, an EOD C2 element on the ground in the early stages of a developing IED campaign and could help civil authorities make an early determination of when to submit the RFA and what additional EOD assets to request. This C2 element could benefit from a sound working knowledge of the RFA process and how to initiate integration with a civil authority task force.

Integration into a civil authority task force is a weak spot for JP 3-42. It does mention the necessity of using non-military jargon and terminology and touts using clear understandable terms when working with civil authority agencies.¹⁰⁸ However, there is barely a mention of the NRF, NIMS, and ICS in the chapter discussing C2 of EOD forces.¹⁰⁹ The requirement to adhere to these systems is not mentioned at all in Appendix

G, which covers EOD DSCA support to law enforcement. Also absent from this appendix is how EOD teams or leadership should integrate with civil authorities during a large-scale response.¹¹⁰

JP 3-42 is the only joint publication on EOD operations that covers procedures for EOD DSCA support missions. ATP 4-32.16, *Multi-Service Tactics Techniques and Procedures for Explosive Ordnance Disposal*, focuses on EOD operations in a joint environment during contingency operations.¹¹¹ ATP 4-32.2, *Multi-Service Tactics Techniques and Procedure for Explosive Ordnance*, serves as a guide for joint service units on how to operate in an explosive ordnance environment and how to integrate EOD assets into a unit's operations.¹¹² These three publications are the only joint EOD doctrine published for the U.S. military. With some exceptions, single service EOD doctrine related to EOD DSCA support is essentially a restatement of JP 3-42 that applies the tenets of JP 3-42 to the respective services.

The Army's ATP 4-32, *Explosive Ordnance Disposal Operations*, does a better job of providing guidance for EOD DSCA missions than JP 3-42. A protracted IED campaign or other prolonged, unusual DSCA response seems to have been considered during its publication. ATP 4-32 does discuss the possibility of EOD integration into civil authority command systems and procedures.¹¹³ It also recommends that EOD company command sections become familiar with DoDD 3025.18 and directs Army EOD personnel to complete NIMS and ICS training.¹¹⁴ ATP 4-32 further suggests that EOD company command sections should integrate with civil authority incident commanders for large-scale responses and allows for the "forward staging" of EOD assets in situations where support is "imminent."¹¹⁵ Another consideration in ATP 4-32 is the process of

“storyboard reporting” for rapid dissemination of information to law enforcement officials while still allowing higher EOD units time to review official EOD reports prior to their release in accordance with established EOD reporting procedures.¹¹⁶

For the most part, ATP 4-32 seems to consider the worst-case DSCA response scenario and does a good job of providing guidance on how to handle a situation like an IED campaign in the United States. It also provides good references for national law and both military and civilian DSCA doctrine. JP 3-42 could benefit from the incorporation of DSCA guidance in a similar fashion.

ATP 4-32.3 *Explosive Ordnance Disposal Company, Platoon, and Team Operations*, another Army publication, also provides detailed guidance on integrating with a civil authority task force and responding to CONUS IED scenarios. It provides a checklist of additional actions an EOD team leader must take when responding to an IED in CONUS versus outside the United States.¹¹⁷ ATP 4-32.3 also includes an entire section that briefly explains NIMS and ICS. This section also provides EOD company and platoon headquarters elements with a list of considerations for integrating into NIMS based civil authority response structure and uses NIMS terminology versus military language.¹¹⁸

The Air Force also recognizes the importance of utilizing NRF and NIMS to integrate C2 personnel into civil authority task forces for DSCA support. The recently updated AFI 32-2001, *Explosive Ordnance Disposal Program*, added guidance from AFI 10-2501 to implement the Air Force Incident Management System into EOD DSCA operations. Use of the , added guidance from AFI 10-2501 to implement the Air is

intended to increase interoperability with civil authorities and is based on NRF and NIMS.¹¹⁹

Military Doctrine Analysis Summary

Military DSCA doctrine from JP 3-28 applies the NRF and NIMS to the joint force when conducting DSCA operations to improve integration and interoperability with civil authorities leading an emergency response effort. Joint force EOD doctrine from JP 4-32 applies the use of NRF and NIMS, but gives very little detail on how EOD forces should integrate into a civil authority task force using these systems. Single service publications give more detailed guidance, particularly the Army's ATP 4-32, but large-scale DSCA missions have potential to be joint operations. More guidance on EOD integrating with civil authorities in JP 3-42's Appendix G could prove helpful for joint force EOD units.

Both JP 3-28 and JP 3-42 are mutually supporting and provide detailed information on the RFA process describing how civil authorities should request federal military support. EOD doctrine provides good detail in this process to the point of addressing the transition from IRA to continued DSCA support under an RFA and suggests a potential decision point for advising civil authorities to submit an RFA. The inclusion of this decision point in JP 3-42 suggests an intent for an EOD C2 element to be involved in the response during the transition from IRA to a formal request for support. JP 3-42 suggests submitting an RFA when a situation escalates in scale to a point where immediate response forces can no longer handle the situation without additional support as could happen during the initial escalation period of an IED campaign. ATP 3-28.1 confirms that a bombing or IED campaign is a situation in which an RFA may be

warranted. EOD leadership integrated into the civil authority CP during this escalation period would be positioned to advise civil authorities and the DCE on development of the RFA including recommendations on the amount of EOD forces required and a proposed command relationship for those forces.

This advice is important because DSCA doctrine is murky at best on command relationships. If ARNORTH does not establish a JTF and the DCO takes command of EOD forces, doctrine is not clear on what authorities the DCO will have. The command authority suggested in JP 3-28 conflicts with the recommendation in ADRP 3-28, and ATP 3-28.1 makes no mention of a possible command relationship. It is assumed that the command relationship would be dictated by a USNORTHCOM or ARNORTH order to allow flexibility vice being prescribed in doctrine. An EOD C2 element embedded with the civil authority task force could advise the DCO on the best command structure for EOD forces to allow for their employment by civil authorities while maintaining a relationship with the parent EOD chain of command for technical and safety oversight.

Joint EOD doctrine is lacking in some regards concerning EOD DSCA support that could affect EOD operations during a prolonged response to a sustained IED threat. Joint doctrine does not address the abbreviated storyboard reporting format for DSCA operations as described in ATP 4-32. JP 3-42 only includes the standard reporting procedures through each service's parent chain of command, which could prove to be slow or unresponsive during a response to a dynamic developing threat such as an escalating IED campaign. If more than one service is involved this could cause friction points and delay information flow to civil authorities. There is also no suggestion in EOD doctrine of where EOD forces would fall within a civil authority command structure.

Multiservice DSCA doctrine in ATP 3-28.1 recommends the FBI's BMC, which seems logical, but Air Force EOD doctrine states EOD should be in the operations section of the task force CP.¹²⁰ Both perspectives are likely true at certain points during the escalation of an IED campaign, but not simultaneously, and joint EOD doctrine does not address this issue at all in JP 4-32's Appendix G. Another glaring absence in joint EOD doctrine is guidance on which service should take the lead if EOD units from multiple services respond to a large-scale incident or IED campaign under IRA. JP 3-42 does address how to organize a lead service EOD task force under a joint force command or JTF.¹²¹ However, it does not provide guidance on how to organize a joint EOD response without an established JTF while each service's forces remain under OPCON from their parent chains of command. Having an EOD command element integrated with a civil authority task force as the single face of federal military EOD support to an IED campaign could be very valuable. However, joint doctrine lacks guidance on which service or unit should serve in that role to prevent civil authorities from having to interface with three to four separate military EOD command or liaison elements to coordinate operations for the same response.

Civil Emergency Response Doctrine

National Incident Management System

The base doctrine for emergency response at all levels of government in the United States is the NIMS. NIMS provides a scalable and tailorable framework for organizing management functions during an emergency response. NIMS consists of five key components: preparedness, communications and information management, resource management, command and management, and ongoing management and

maintenance. These components operate on two main principles, flexibility, and standardization. Essentially, NIMS calls for constant planning and preparation for response and standardizes the organizational structure of emergency management staffs so that the staffs can grow and incorporate other agencies as the situation and response grow in scale. The thought process behind NIMS is that if all emergency responders organize and operate in the same fashion then integrating assets and growing the response effort is easier because it will not require any reorganization of the management structure.¹²²

The components of NIMS that are critical to military EOD's ability to assist civil authorities during a prolonged IED campaign are preparedness, communications and information management, resource management, and command and management. Preparedness calls for activities such as training exercises, interoperability planning, personnel certifications, etc.¹²³ In the case of military EOD, this implies that military EOD units should establish working relationships with and attend planning meetings with local, state, and federal response authorities as well as acquire communication systems and tools that match civil response standards for interoperability and conduct regular training with civil authorities.

The communications and information management component of NIMS touts the importance of building a common operating picture through the interoperability, reliability, scalability, portability, resiliency, and redundancy of communications systems and the effective management of information flow and dissemination.¹²⁴ The importance of these concepts for communication and information management for military EOD units is the interoperability, resiliency, and redundancy of communications. ATP 4-32

states that cell phones may be used as a primary source of communication with civil authorities but may be unreliable. It also mentions the importance of maintaining radio communications with range control for on-installation response.¹²⁵ What the ATP does not mention is redundant communications systems or a requirement for EOD response vehicles to be outfitted with communications systems that are compatible with civil authority communications systems. Additionally, the management portion of the communications and information section of NIMS discusses the use of “common terminology” or “plain language.”¹²⁶ This suggests that military EOD units should training on radio communications without using military jargon or brevity codes and writing EOD reports without using military terms and abbreviations.

Resource management in NIMS mostly deals with the sourcing, implementation, and tracking of resources for a response.¹²⁷ A key portion of resource management is “credentialing.” Credentialing is the process of verifying that emergency response personnel have all the necessary training and certifications required of first responders.¹²⁸ To meet this requirement of NIMS military EOD operators must complete training on hazardous materials response, complete an Occupational Health and Safety Administration physical, and any other required training prior to assuming response duties.¹²⁹ These requirements are codified in single service EOD doctrine but are noticeably absent from joint EOD doctrine.

Perhaps the most important component of NIMS for military EOD units to understand is command and management. This component is comprised of the various command organization structures used during an emergency response including the ICS and the multi-agency command (MAC) system which an EOD C2 element could

integrate with during a response to an IED campaign.¹³⁰ The ICS applies to all emergency response situations and appears in one of two forms of command, single incident command and unified command. Single incident command structures are used when only one jurisdiction is involved in a small-scale response. Unified command is the most common and more applicable to a response to a large-scale response.¹³¹ Both forms of the ICS share the same basic organizational structure. ICS organizes incident command staffs into a command section, operations section, planning section, logistics section, and finance and administration section as shown in the figure 2.¹³²

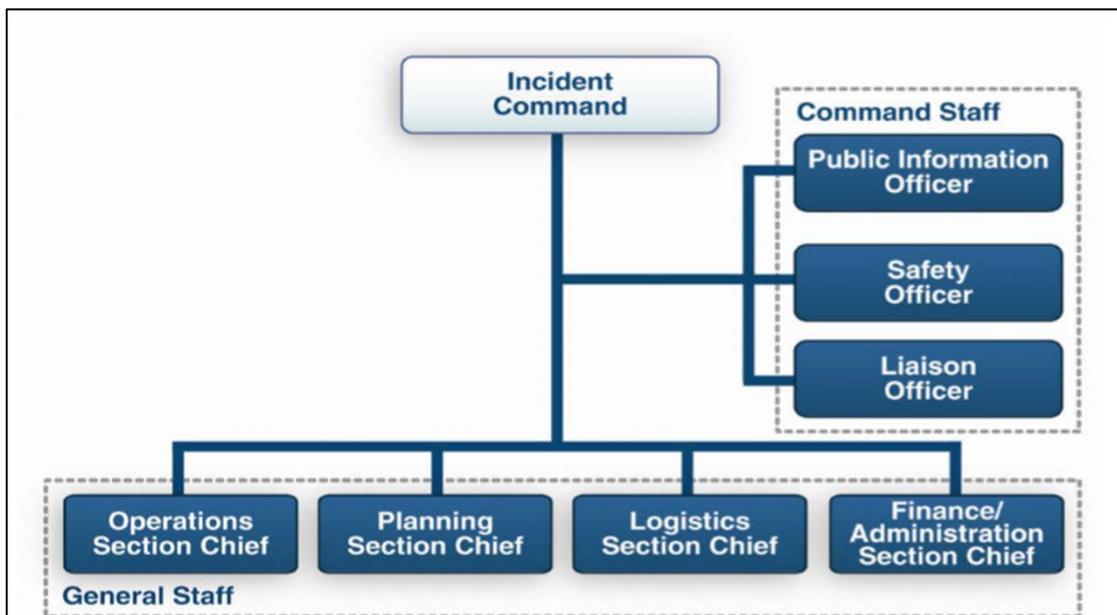


Figure 2. Basic Incident Command System Organization

Source: U.S. Department of Homeland Security, *National Incident Management System* (Washington, DC: U.S. Department of Homeland Security, December 2008), accessed April 12, 2017, https://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf, 53.

In a unified command structure the leaders of the jurisdictions and agencies involved share command but nominate a single operations chief to lead the response operations.¹³³ It is important for military EOD operators to understand the organization of an incident response staff under NIMS so that they know the roles of the various CP personnel and understand whom the military EOD units should interface with during the response.

Military EOD teams or C2 elements would interface with the operations section. The operations section is responsible for reducing hazards, saving lives and property, and establishing control of the situation.¹³⁴ The organization of the operations section like every other framework under NIMS and NRF is adaptable and scalable. The size and organization of an operations section during a response is based on span of control. To simplify command structures, NIMS states that no supervisor should have to manage more than five to ten personnel. Therefore, as the size of the response grows, the operations section may incorporate additional branches, divisions, or groups based on the situation to reduce the span of control. The NIMS core document Appendix B goes into great depth on this concept.¹³⁵ The key take away for military EOD personnel is that interface with an ICP should begin at the operations section.

The other organizational structure that military EOD personnel could possibly integrate with during a response to an IED campaign is a MAC system. As an incident develops and becomes more complex, the command structure will likely evolve from an ICP to a MAC, especially as the transition to a unified command begins. This is particularly true if multiple incident sites are involved. A MAC allows for planning, resource management, and coordination activities to occur off-site from the incident so

that responders in the ICP can focus on managing the incident itself.¹³⁶ The structure of a MAC can vary, and jurisdictions codify the organization of various MACs in mutual agreements or prior plans with other agencies. A MAC is a conglomerate of dispatch centers, emergency operations centers (EOCs), and department operations centers working as an integrated network to plan, source, and allocate resources based on priority.¹³⁷ Figure 3 shows the transition from a single incident under ICS to a unified command under MAC:¹³⁸ EOD teams responding to incidents under a MAC system would likely respond to the respective ICPs at the incident sites where their skills are needed. However, an EOD C2 element serving in an advisory and coordination role would likely interface with the EOC or DOC that is responsible for managing EOD and PSBS assets.

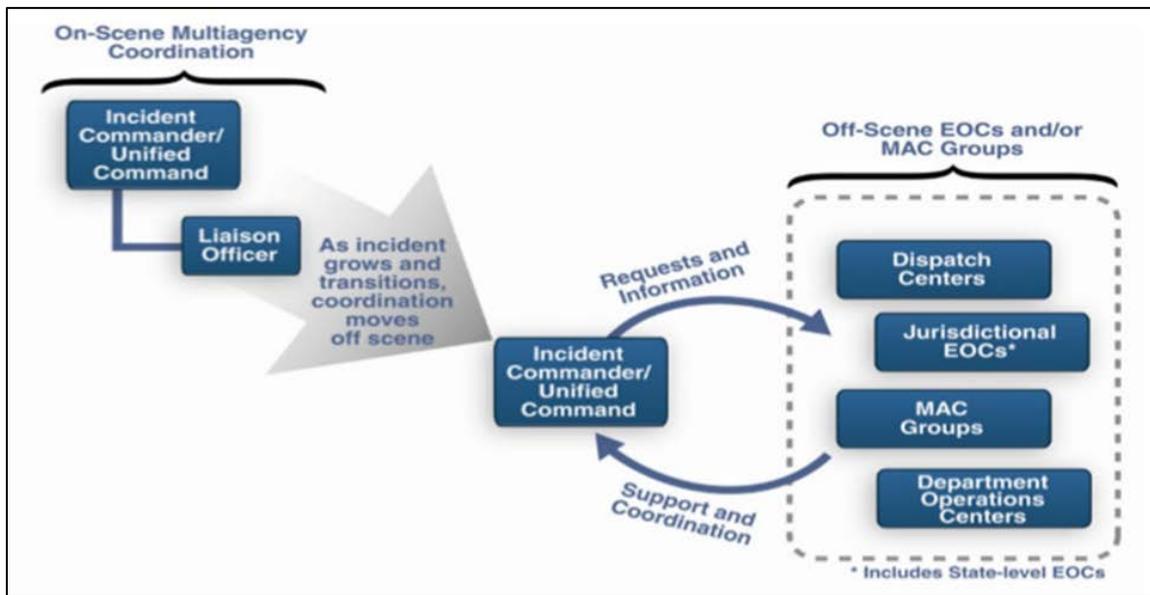


Figure 3. Multi-Agency Command Organization

Source: U.S. Department of Homeland Security, *National Incident Management System* (Washington, DC: U.S. Department of Homeland Security, December 2008), accessed April 12, 2017, https://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf, 65.

National Response Framework

The NRF is a system designed to establish roles and responsibilities for all levels of government and private partners during emergency response operations. NRF builds on the foundation of NIMS with scalable and adaptable responses by utilizing the tiered response concept. Tiered response operates on the intent to solve situations at the lowest level possible to conserve emergency response assets. It allows the commitment of assets to increase as the scope and scale of an emergency response grow. Most incidents will start with the response of local assets but as a situation exceeds local assets, adjacent jurisdictions, state assets, and federal assets can respond as needed through initial response authority or a RFA from the local jurisdiction.¹³⁹ The NRF assigns roles and responsibilities to emergency response partners at all levels to ensure a seamless application of the appropriate resources at the appropriate time through established processes.

The NRF consists of its core document and three annexes, ESF Annex, Support Function Annex, and Incident Annexes.¹⁴⁰ The core document applies to all emergency responders, and DoD applies the NRF through JP 3-28 and JP 3-42. Additionally, the ESF and Incident Annexes also apply to military EOD responses. The ESF Annex contains a list of 14 separate groups of emergency response capability sets that may be required to respond to an emergency situation. In a sense, it serves as tailorable menu of response assets that aid civil authorities in requesting support for certain

situations.¹⁴¹ ESF #5 Information and Planning, ESF #10 Oil and Hazardous Materials Response and ESF #13 Public Safety and Security all apply to the EOD CONUS response mission set.¹⁴² If a local state or federal authority requests EOD forces for ESF #5, #13, #10 to counter an IED campaign, the demands of all three functions could certainly overwhelm EOD assets at the team level. The requirements of ESF #10 or #13 could limit EOD teams' abilities to adequately perform the functions required under ESF #5 to assist local authorities in building a common operating picture and unity of effort.

C2 of an IED campaign may initially start out with a civil authority ICP or MAC requesting assets from an ESF list, but most likely, it will begin transitioning to C2 in accordance with the Terrorism Incident Law Enforcement and Investigation Annex found in the NRF's Incident Annexes. Incident annexes provide guidance in addition to the ESFs to apply critical core capabilities to unique situations.¹⁴³ Incident annexes included in the NRF cover biological incidents, catastrophic incidents, cyber incidents, food and agriculture incidents, mass evacuation incidents, nuclear/radiological incidents, and terrorism incidents prompting law enforcement investigations.

Civil Authority Terrorism/Bombing Incident Doctrine

Terrorism Incident Law Enforcement Investigation Annex

The Terrorism Incident Law Enforcement Investigation Annex (TILEIA) covers the C2 structure for FBI operations in response to an incident of terrorism. As discussed in the Phase 1 Legal Analysis, the FBI has jurisdiction over response operations and investigations related to incidents of terrorism, but they cannot accomplish the task alone. The FBI must also have a scalable, tailorable command structure to control operations and integrate assets from outside agencies.

The TILEIA lays out the evolution of an FBI CP to a joint field office (JFO) as a situation grows and escalates. Once an IED attack becomes a confirmed act of terrorism, the local FBI Special Agent in Charge (SAC) would establish an FBI CP.¹⁴⁴ As the campaign escalates from an initial attack requiring additional response capabilities, the CP will grow in scale to become a joint operations center (JOC). Both the JOC and the CP are typically organized into three groups: command group, operations group, and operations support group. In the case of a chemical, biological, radiological, nuclear, and high yield explosives (CBRNE) or weapons of mass destruction (WMD) attack the JOC would take on a fourth group, a consequence management group. This structure considers that assets from other agencies will need to integrate with the JOC, and it is organized accordingly.¹⁴⁵ If the Secretary of Homeland Security and the U.S. Attorney General determine an incident to be an “Incident of National Significance,” and it is assumed an IED campaign would, then the JOC would assume an even larger staff and become a JFO. Both the JOC and the JFO are examples of MAC groups that are incorporated in the MAC structure of NIMS. Figure 4 shows a JOC organization chart.¹⁴⁶

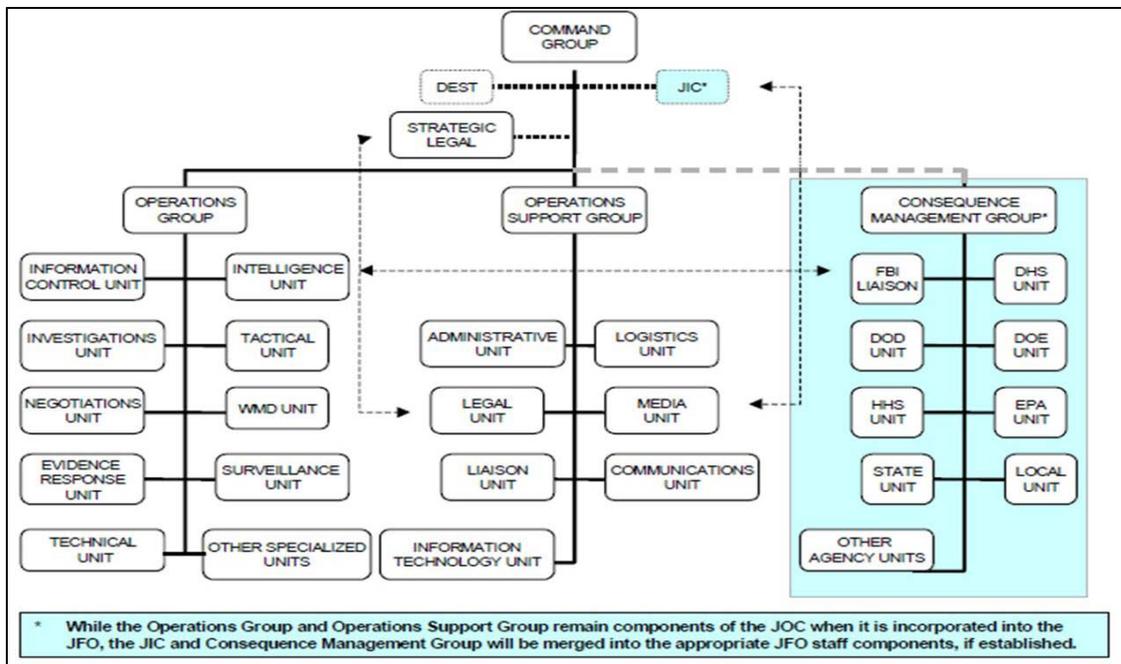


Figure 4. FBI Joint Operations Center Organization

Source: U.S. Department of Homeland Security, *Terrorism Incident Law Enforcement and Investigation Annex to National Response Framework* (Washington, DC: U.S. Department of Homeland Security, December 2004), accessed October 13, 2016, https://www.fema.gov/media-library-data/20130726-1825-25045-5502/terrorism_incident_law_enforcement__investigation_annex_2004.pdf, TER-6.

The operations group is typically divided into four units: information intake, intelligence, investigations, and field operations.¹⁴⁷ The field operations unit includes representatives from all local, state, and federal specialized units such as tactical teams, evidence response, WMD/CBRNE, etc. The purpose of the field operations unit is to coordinate special unit efforts to accomplish the SAC’s overall plan for response at a strategic level. Specific teams conducting operations are managed by agents at the respective incident sites.¹⁴⁸

As mentioned in ATP 3.28.1, a BMC may also be included in the operations section of the JOC for incidents involving explosives. The purpose of the BMC is to manage requests for resources to deal with explosive threats, assign tasks and priorities related to operations involving explosive threats, and serve as the subject matter expert to the SAC for all explosive related operations.¹⁴⁹ Like other NIMS based structures, the BMC is modular and scalable to fit the size of the incident even ones involving multiple jurisdiction and incident sites.¹⁵⁰

If an FBI CP or JOC is established due to a bombing event or series of events and military EOD teams have been requested to support, there appears to be a need for an EOD C2 element to deploy and integrate into the field operations unit until the BMC has deployed and been established.

Civil Emergency Response Doctrine Summary

NIMS is the baseline for all civil emergency response doctrine. NIMS is a framework for organizing emergency response operations at all levels of government and applies to emergency responses of any scale. Preparedness, flexibility, scalability, tailorability, interoperability, clear communication, and building a common operating picture are some of the key tenets that enable NIMS to operate effectively. Using these ideals, the command structure of NIMS can easily expand or contract to mirror the size of the incident because command staffs at each level of government have the same basic organization. Of the four staff sections in the NIMS organizational model, EOD assets responding to an IED campaign would likely interface with the operations section which is responsible for reducing hazards, saving lives and property, and establishing control of the situation

The NRF builds on NIMS by setting the roles and responsibilities for emergency response partners at all levels of government and the private sector. NRF establishes processes for local, state, and federal agencies to request emergency assets if existing capabilities are insufficient to respond to a situation. NRF allows for the integration of federal military assets into civil authority response frameworks through IRA or the RFA process. NRF also establishes a list of 14 standardized ESF that act as a menu of emergency response capabilities that lead agencies can request to assist with an emergency situation. NRF is important to the EOD DSCA mission because EOD assets could be called on to assist local authorities with up to three ESF categories and, military EOD assets would most likely become involved through the IRA or RFA process as described in NRF doctrine. Additionally, NRF contains a series of incident annexes including the TILEIA. TILEIA lays out the various command structures used by the FBI during an evolving terrorism incident or investigation. Response to an IED campaign in CONUS falls under FBI jurisdiction. Thus, EOD assets requested to assist in the response would likely integrate into one of the command structures contained in TILEIA through either the Field Operations section or the BMC.

Phase 1 Doctrine Analysis Raw Data Summary

U.S. military joint DSCA and EOD doctrine apply the civil authority emergency response doctrine of NIMS and NRF to the joint force including EOD assets. In addition, both DSCA and EOD military doctrine adequately describe the requirements for IRA and formal requests for assistance, as does NRF, that allow federal military assets to respond to requests for support to civil authorities in the United States. On this point, military

EOD doctrine goes as far as suggesting potential decision points not included in DSCA doctrine or codified in USC that could increase the responsiveness of the RFA process.

However, joint EOD doctrine gives very little guidance on how units should conduct DSCA operations in general or how they should integrate EOD C2 into a NIMS organizational structure. Joint EOD doctrine also does not address the potential requirement for any type of EOD C2 element to integrate into a civil authority command structures. In fact, there is no joint EOD doctrine covering EOD DSCA operations aside from an appendix in JP 3-42, which gives a small amount of vague guidance and only briefly mentions NIMS and NRF.

Joint EOD doctrine does not provide any type of standardized storyboard reporting format for joint force EOD DSCA missions to expedite the release of information to law enforcement. There is also no guidance at the joint level on how EOD units should interface with NIMS organized staff. This information can only be garnered through an obscure passage in ATP 3-28.1, a multi-service DSCA publication, about the BMC or through careful study of staff functions in the NIMS core doctrine. This lack of EOD joint doctrine has the potential to negatively affect joint interoperability and integration during a joint DSCA mission should the need arise. It also directly violates one of the two core concepts of NIMS, standardization.

Though joint EOD doctrine may not give much consideration to DSCA response, civil emergency response doctrine provides ample guidance to allow understanding of how EOD assets could integrate into civil authority command structures organized under NIMS. Like military DSCA and EOD doctrine, the NRF gives a significant overview of both federal military's IRA and the RFA process for requesting DoD assets. This allows

civil authorities to understand how to get federal military assets involved in the response. Study of staff group functions in NIMS core doctrine shows which staff groups various military assets would interface with. Most likely, EOD C2 elements would integrate with the operations group regardless of the level of civil response headquarters involved from the local ICP to a full JFO.

In the event of an IED campaign or other terrorist incident involving EOD assets, the FBI would establish the civil authority command structure under the TILEIA of NRF. The FBI would have jurisdiction overall confirmed acts of terrorism. FBI command structures are roughly based on NIMS. EOD assets, especially C2, would integrate with the field operations section under this organization as well. Initial integration would most likely occur at the local FBI field office's CP and would continue through the establishment of a JOC and JFO as the situation escalated. However, once the FBI's BMC is established, EOD C2 personnel would be expected to interface with the FBI field operations through the BMC as described in ATP 3-28.1, but joint EOD doctrine does not provide guidance on this integration.

The information obtained in the Phase 1 Doctrine Analysis answers the following secondary research questions:

1. How well does U.S. military and EOD doctrine address the C2 of EOD forces conducting a prolonged DSCA response mission?

Individual service doctrine provides adequate guidance to allow U.S. military EOD commanders to plan for, react to, and support a prolonged DSCA mission with civil law enforcement to counter an IED campaign in the United States. However, joint EOD doctrine is significantly lacking in this area. DSCA support is a joint mission and the lack

of joint EOD doctrine for DSCA support could lead to significant issues with interoperability if multiple services are providing support to the same DSCA mission. Joint EOD doctrine lacks guidance on how to establish C2 and ensure unity of effort during a joint EOD DSCA response or a response involving multiple units of the same service. Advance guidance on the integration of military EOD assets into a civil authority command structure during a large-scale response such as an IED campaign could help ensure proper integration and reduce friction during the transition phase of an escalating IED campaign.

2. How well does civilian agency doctrine address the military's role in commanding and controlling a response to a prolonged IED incident?

NRF and NIMS do not specifically address EOD operations, but they both extensively provide guidance on the integration of federal military assets providing DSCA support. Both NRF and NIMS are frameworks intentionally designed to be flexible and tailorable to any situation, so it is not surprising to see that specific response capabilities such as EOD are not addressed. This flexibility makes integration of EOD assets into a civil authority task force relatively easy. EOD units would integrate into a NIMS command structure just like any other military unit providing DSCA support. EOD teams interface with the ICP on the incident site and EOD C2 interfaces with the operations section of the appropriate level of civil authority headquarters. TILEIA does mention the integration of specific tactical capabilities and technical expertise into the field operations section of an FBI task force. Thus, EOD integration into an FBI task force CP, JOC, or JFO is supported by TILEIA doctrine. The advent of the FBI's Bomb Management Center (BMC), tasked with overseeing all explosive related assets, creates a

slightly different but even clearer path for U.S. military EOD integration into an FBI task force.

Training and Operations Practice

This section examines the conduct of EOD DSCA support during training events and responses involving large-scale terrorist or bombing attacks. The purpose of this section is to assess the application of law, policy, and guidance, and doctrine related to EOD DSCA support to identify potential shortcomings in these documents or the abilities of EOD units in the field to conduct operations in accordance with them. There is a distinct lack of open source information regarding the integration of military EOD assets into a civil authority task force for prolonged DSCA operations. Most AARs that show military or law enforcement capabilities or capability gaps during training and operations are classified or protected by some form of sensitive but unclassified designation. Therefore, the documentation available in open source is only a synopsis of major issues with vague detail in terms of capability gaps. The overall lack of information results from two factors. First, there is only one large-scale military EOD and PSBS interoperability exercise from which to draw information about the integration of EOD and civil authorities, the Raven's Challenge Exercise. Additionally, a sustained IED campaign threat has not developed in the United States, so examining AARs to counter this threat is impossible. However, 387th EOD Company's (Massachusetts National Guard) involvement in the response to the 2013 Boston Marathon Bombing as part of JTF-MA (Massachusetts National Guard JTF) provides valuable input and is as similar to the hypothesized threat as can be examined. A cross reference of the available training and

operational information identified common trends affecting military EOD's ability to integrate into a civil authority command structure.

Raven's Challenge Exercise

Raven's Challenge is a national level exercise led by Department of the Army's G-38 staff and the BATFE National Center for Explosives Training and Research in partnership with the FBI and DHS. Raven's Challenge is held annually in various locations across the United States.¹⁵¹ The purposes of Raven's Challenge are to build CIED readiness and capacity in the U.S. homeland through exercising tactical level CIED operations to increase interagency interoperability.¹⁵² Official AARs for Raven's Challenge are available for individuals with a need to know but are restricted from release to the public. However, some AARs from military units that participated in Raven's Challenge exercises, though less detailed, are available through open source. These AARs do offer some insight that helps assess how well U.S. military EOD units are prepared to C2 EOD forces assisting civil law enforcement to counter an IED campaign in CONUS.

Two AARs were available for examination through open sourcing. Both AARs cover different iterations of Raven's Challenge X conducted in 2016. One AAR was produced by 63d Ordnance Battalion (EOD) after participation in the Oriskany, NY iteration, and the other was published by 79th Ordnance Battalion (EOD) covering the Ft Wolters, TX iteration. The exercises in 2016 were some of the first to implement the FBI's BMC during a Raven's Challenge Exercise.¹⁵³ Both 63d and 79th EOD Battalions reported favorably on the inclusion of the BMC in the exercise indicating that both units found value in the BMC concept and saw utility in being integrated with the BMC. 79th

EOD Battalion pointed out the BMC's briefings that passed updated intelligence information to EOD units as a positive function of the BMC.¹⁵⁴ 63d EOD Battalion's AAR stated that the role of the BMC in Raven's Challenge was essential to ensuring interoperability among the various agencies involved including EOD and PSBS, and referred to the BMC as a, "lynchpin for the success of future exercises."¹⁵⁵

However, both units also expressed issues integrating with the BMC. 79th EOD Battalion's main issue with integration involved the number of battalion staff members in the BMC. The AAR recommends a reduction in the number of military personnel in the BMC, especially support personnel. It also notes a, "limited capacity for Army personnel to be integrated into the exercise within the BMC."¹⁵⁶ 79th EOD did not give any further information regarding how many people they had in the BMC or what their functions were, but a reasonable inference is that the BMC only needs a few military personnel with technical EOD knowledge to help assess operations and act as liaisons for military EOD units.

63d EOD Battalion's integration issue related to confusion over the military's role in the BMC. The AAR states, "There was confusion as to what part the military would play within the BMC, and it was clear that everyone did not fully understand the purpose of the BMC."¹⁵⁷ The AAR simply states everyone did not understand the purpose of the BMC without clarifying whether the confusion was on behalf of the civil authorities, military personnel, or both. The recommendation to solve this problem put forth in the AAR was for senior leadership to become familiar with the function of the BMC and the military's role.¹⁵⁸ The AAR did not specify if this observation was directed at civil or military senior leadership. The inference is that this comment is addressing military

leadership because the civil authority leadership in this case are the developers of the BMC and its doctrine for use. This confusion over the BMC's function and DoD's role in the BMC experienced by both units could be a result of the identified shortfall in joint EOD doctrine identified in the Phase 1 Doctrine Analysis.

JTF-MA Response to the Boston Marathon Bombing

JTF-MA was an ad hoc Massachusetts National Guard JTF hastily organized during the initial hours after the 2013 bombing of the Boston Marathon to coordinate the National Guard effort to support law enforcement and recovery efforts.¹⁵⁹ 387th EOD Company of the Massachusetts National Guard was part of JTF-MA and was tasked with assisting the Boston Police Department with additional bomb squad capabilities in support of the marathon.¹⁶⁰ An examination of 387th EOD Company's experiences during this response to a single IED incident provides a micro view of what EOD units may experience during a response to an IED campaign in CONUS. Study of 387th's experience does not provide a full picture of issues that federal military EOD units may experience in this situation, but it is instructive. 387th was a National Guard unit within their parent National Guard chain of command. However, some of the friction points encountered by 387th provide some insight into what active duty units could anticipate in response to an IED campaign. A JTF-MA AAR conducted following the incident provides good detail on the issues encountered by 387th and other units during the response that pertain to the research questions of this study.

79th Troop Command, also known as TF Patriot, was subordinate to JTF-MA and the parent command for 387th EOD. 79th identified a problem with EOD integration into law enforcement operations.¹⁶¹ TF Patriot noted a lack of knowledge on the proper

utilization of EOD assets by the command and law enforcement as well as no common understanding of tactics, techniques, and procedures between EOD assets and law enforcement personnel. The recommendation from TF Patriot was to include 387th EOD Company in the future planning for special events and potential response situations and to initiate interoperability training between EOD and law enforcement personnel during National Guard annual training and drill weekends.¹⁶²

The other major issue facing 387th EOD Company during their response was a lack of communications ability.¹⁶³ The company's headquarters was located at Hotel Lenox.¹⁶⁴ This location was important because it served as the Boston Police Bomb Squad's CP due to its proximity to the bombing site.¹⁶⁵ The 387th EOD Company did not have an organic internet connection capability and was forced to borrow internet connectivity, which was limited, from the hotel. Limited connectivity left the unit with no way to access the EOC's shared drive or utilize the internet for reporting purposes.¹⁶⁶ The implication from this situation is that active duty EOD units responding to assist civil authorities in a similar situation would also need their own internet connectivity to exercise effective C2 of EOD forces and provide timely, accurate reporting. The use of Wi-Fi hotspots or similar devices as a solution was suggested in the JTF-MA AAR.¹⁶⁷

Cell phone communication was also a major problem that caused interoperability issues for 387th EOD Company. As identified during the Phase 1 Doctrine Analysis, ATP 4-32 allows cell phones to serve as primary means of communications for EOD teams during response missions without mentioning the use of backup systems compatible with emergency response communications platforms. 387th EOD Company attempted to utilize cell phones as a primary means of communication for coordination of

operations with canine teams and other responders.¹⁶⁸ This method of communication ultimately failed. As noted by the JTF-MA J6 (communications officer) during the AAR, cell phone infrastructure in Boston after the bombing was completely flooded with traffic and became unreliable. The J6 stated that, “cell service within the ground zero area was non-existing.”¹⁶⁹ The effects of this situation on response operations was noted by the JTF-MA J3 (operations officer) who pointed out that the 800 megahertz radio network used by first responders was a reliable form of communications during the cell phone network failure.¹⁷⁰ This experience suggests that EOD teams responding to a similar situation in the future could experience communications interoperability issues with civil emergency response agencies.

Another situation resulted from the Boston Marathon Bombing response that has potential implications for an EOD response to a sustained IED campaign: the potential for joint EOD DSCA operations. 387th EOD Company was not the only military EOD unit involved in the Boston Marathon Bombing response. An active duty Navy EOD team stationed at Newport, RI responded under IRA in support of the Massachusetts State Police and provided support for two days.¹⁷¹ Research did show that the Army National Guard and Navy EOD teams did report to the same makeshift headquarters at the Lenox Hotel, but did not confirm whether or not they conducted operations together.¹⁷² Regardless, the fact that multiple services responded to the same incident shows that joint EOD DSCA missions could happen in future situations. A lack of joint EOD doctrine could hamper interoperability in that situation.

26th Maneuver Enhancement Brigade (MEB), TF Yankee, also participated in the response to the Boston Marathon Bombing and participated in the JTF-MA AAR.

Though 26 MEB did not command any EOD assets during the response, they did identify a key lesson learned during the AAR that is worthy of consideration. 26 MEB identified the importance of using trained, experienced liaison officers at all levels of CPs from ICPs to EOCs. The recommendation put forth by TF Yankee during the AAR was for liaison officers to complete FEMA Incident Supervisor 100, 200, and 300 courses on ICS operations and IS 700 and 800 on the implementation of NIMS and NRF.¹⁷³ This suggests that military leaders integrating with a civil authority command structure could benefit from FEMA course training.

Perhaps, the most important lesson learned from the Boston Marathon Bombing is how quickly local EOD assets can be overwhelmed. This was noted by the Massachusetts emergency preparedness liaison officer during the JTF-MA AAR. He stated a, “serious concern for available (sic) of MP’s, EOD and bomb sniffing dogs in the region if the situation escalated.”¹⁷⁴ Not only did available EOD technicians, both civil and military, have to deal with the post blast analysis from the two detonated bombs, but also technicians had to rapidly clear countless bags dropped by fleeing bystanders to ensure additional bombs were not set to detonate on first responders.¹⁷⁵ The following days after the attack brought hundreds of suspicious package calls from hyper vigilant citizens and law enforcement personnel, and the shootout that resulted in Tamerlan Tzarnaev’s death also involved the use of multiple explosive devices.¹⁷⁶ In fact, 45 bomb technicians and 40 canine handlers from 387th EOD Company, U.S. Navy, Suffolk County, New Hampshire State Police, New York, and Connecticut worked 16-hour shifts for several days to keep up with the calls.¹⁷⁷ This conglomerate of bomb technicians worked 196 calls in five days following the attacks.¹⁷⁸ This was the result of one attack, the problem

would have been much worse if the Tzarnaev brothers had made their way up the East Coast to conduct more attacks as planned. A set of coordinated and sustained attacks from a group or multiple groups of “Tzarnaev brothers” would certainly require significant EOD assets for a response. The involvement of federal military EOD assets from multiple services over multiple jurisdictions would be highly likely in that type of situation. David Gutzmer, commander of Monroe County (New York) bomb squad, was one of the bomb squad members who responded to the Boston Marathon Bombing. In an October 2013 interview about the attack, he stated that Boston changed the paradigm for thinking about bombing attacks in the United States. He says that prior to Boston his bomb squad trained for a single device placed by an attacker who had left the scene. After the attack, Gutzmer said, “We’re not looking for one bomber who places a device and leaves. We’re looking for an active bomber with multiple bombs, and we need to act fast.”¹⁷⁹ This assessment could prove to be the future of terrorist bombing attacks in the United States.

Phase 1 Training and Operations Practice Analysis Raw Data Summary

The raw data gained from the Phase 1 analysis of training AARs from Raven’s Challenge and operational AARs from the 2013 Boston Marathon Bombing shows a set of trends and areas that need improvement to enhance U.S. military EOD assets’ abilities to assist civil authorities in responding to an IED campaign in CONUS.

Feedback from Raven’s Challenge exercises showed the FBI’s BMC as an effective tool for the integration of military EOD assets into a civil authority task force, but more training and planning may be necessary to further define military EOD C2

functions within the BMC. The following areas for improvement were identified during the examined iterations of Raven's Challenge:

1. The lack of understanding of the roles and responsibilities of military personnel in the BMC hindered military integration with civil authorities.
2. No definitive solution exists for the proper manning and training of military liaison personnel working in the BMC.

Some of the lessons learned from the military EOD response to the Boston Marathon Bombing correlate with observations made during Raven's Challenge exercises. Other lessons from the Boston response provide insight to issues that military EOD units may encounter during a response to an escalating IED campaign. The following observations were recorded during the Boston Marathon Bombing response:

1. JTF-MA lacked an understanding of military EOD roles and capabilities causing integration issues during the initial hours of the response.
2. EOD teams' reliance on cellular phones as the primary platform for communications with civil authorities, as allowed by ATP 4-32, led to communications failures when communications traffic overwhelmed the cellular network.
3. Liaison officers were critical enablers for the integration of military assets with civil authorities and the establishment of unity of effort. FEMA IS training courses could better prepare liaison officers and command elements to integrate military assets into civil authority command structures.

4. Potential exists for a joint EOD response to a widespread bombing campaign.

The response overwhelmed local PSBS assets leading to requests for support from both Army National Guard and active duty Navy EOD assets.

The compilation of areas for improvement identified during training for Raven's Challenge and the Boston Marathon bombing response provides a comprehensive list of potential shortfalls for the integration of military EOD assets into an IED campaign response. Specific areas identified as shortfalls or problems during in both training and operations include:

1. Integration of military assets into a civil authority task force.
2. Doctrinal guidance on the C2 of a joint EOD DSCA response.
3. Communications capabilities for EOD DSCA response.
4. A lack of trained, experienced liaison officers to interface with civil authorities.

Analysis Phase 2: Cross Category Content Comparison

Phase 2 Threat Analysis

Raw data collected during the Phase 1 Threat Analysis shows potential for a sustained IED terror campaign to develop in the United States. Numerous terror groups including international terror organizations, HVE, left/right-wing terrorists, and special interest terrorist have all shown an ability to carry out their agendas by conducting attacks involving the use of explosives or IEDs.¹⁸⁰ The IED is certainly not a new threat to the U.S. homeland. Reports from the BATFE show that well over one hundred IED incidents occur in the United States every year.¹⁸¹ In recent years, efforts to combat this threat have seen the rise of new challenges in the CIED fight. The advent of social media has given

international terrorists and extremists a platform to share information on IED tactics, techniques, and construction as well as share their extremist views inspiring actors around the world to carry out terror attacks.¹⁸² Further complicating matters, an increased use of encrypted internet communications is hindering intelligence efforts to detect and monitor potential international and homegrown terror threats.¹⁸³ Additionally, recent attacks from HVEs, especially the Tsarnaev Brothers and Ahmad Khan Rahami, have been characterized by the use of multiple bombs against multiple targets by actors that are mobile over a wide area.¹⁸⁴

When this raw data is compared across other source categories, some correlations stand out. The first correlation with the threat analysis is in policy and strategy. President Obama's PPD, *Countering Improvised Explosive Devices*, recognizes that IEDs are a threat to the security of U.S. homeland. This policy calls for a "whole-of government" approach to decrease the threat that IEDs pose against the U.S. homeland as well as abroad.¹⁸⁵ DoD recognizes its potential involvement in a "whole-of-government" approach to IED attacks in CONUS. In publishing DoDD 3025.21, DoD included a section pertaining specifically to military EOD operations in CONUS to assist civil authorities with IEDs and other explosive threats.¹⁸⁶

Another important correlation with the threat analysis is seen with the Phase 1 Practice Analysis. The characterization of future threats using multiple bombs in multiple locations while on the move manifested itself to some extent during the 2013 Boston Marathon Bombing. Interviews and AARs conducted by first responders including U.S. military EOD assets and PSBS personnel show that this type of threat can quickly overwhelm local EOD and PSBS assets.¹⁸⁷ The implication from studying the Boston

Marathon Bombing is that a response to a threat such as the one described during the Phase 1 Threat Analysis will require active duty U.S. military EOD assets in significant quantities for extended periods.

Phase 2 Legal Analysis

Current U.S. national law appears adequate to allow the use of military EOD forces to support civil authorities with minor limitations. The Stafford Act codified in Title 42 USC grants EOD commanders IRA to respond to requests from civil authorities to save lives and protect property without prior approval from a higher authority. This law also establishes the formal RFA process to allow for support to civil authorities for long-term support outside the parameters of immediate response.¹⁸⁸ The Stafford Act is communicated to DoD organizations through DoDD 3025.18, which imposes a 72-hour restriction on IRA. At the 72-hour mark, support conducted under immediate response must be examined to ensure that immediate response criteria are still relevant to the situation.¹⁸⁹ Another law limiting EOD operations is the Posse Comitatus Act, which prohibits federal military EOD teams from collecting evidence related to explosive events or securing incident sites.¹⁹⁰ Lastly, Title 18 USC grants jurisdiction of terrorist related incidents such as an IED campaign to the federal government, which could dictate how military EOD forces integrate into a civil authority command structure during the response.¹⁹¹

When cross-referenced with national policy and strategy, national laws are supportive of the whole-of-government approach to countering IEDs and countering terrorism. Laws allow for the integration of U.S. military forces into civil authority responses to combat these threats. However, national law limits the authority granted to

federal forces while carrying out these duties. Therefore, all levels of government from local to national must work in unison to apply policy while adhering to national law.

Law, like policy, also helps drive the development and manner of execution for doctrine. National law is accurately reflected in military and civilian doctrine. Titles 42, 32, 18, and 10 USC and their effects on military operations are all accurately addressed in both DSCA and EOD doctrine. For example, the requirements for IRA and the RFA process are clearly addressed in JP 3-28.¹⁹² Five of the six pages covering EOD DSCA support in JP 3-42, Appendix G are dedicated to discussing the national laws applicable to that mission set.¹⁹³

Likewise, civil response doctrine covers laws effecting federal military support to civil authorities. The NRF provides a footnote and references for both IRA and the RFA process to civil authorities.¹⁹⁴ The TILEIA of NRF is direct reflection of the federal government's plans to execute jurisdiction through the FBI over terrorism incidents granted by Title 18 USC.¹⁹⁵

National law itself showed no real significant effect on real world execution of military EOD integration with civil authorities in either training during Raven's Challenge or execution during the Boston Marathon Bombing response, at least not to the point that participants addresses issues with national law in any AARs. Therefore, this Phase 2 legal analysis concludes that national law, though somewhat limiting, is far from constraining or prohibitive of a U.S. military EOD response to an IED campaign in CONUS.

Phase 2 Policy and Strategy Analysis

As discussed during the Phase 2 Threat Analysis, national policy in PPD 17, *Countering Improvised Explosive Devices*, recognizes the IED threat to the U.S. homeland and calls for a whole-of-government approach to counter the threat. This whole-of-government theme is carried thorough the NSS and NMS. However, the NMS produced by the Chairman of the Joint Chiefs of Staff focuses on defeating the threat before it reaches U.S. soil and ranks DSCA low on its prioritized list of joint force missions.¹⁹⁶

Despite this ranking, the DoD recognizes that the EOD DSCA mission is important to a “whole-of-government” approach to counter-terrorism. Therefore, DoD included a section on EOD support in its policy directive DoDD 3025.21, *Defense Support of Civil Law Enforcement Agencies*.¹⁹⁷ This directive ensures support to civil law enforcement is conducted in accordance with national law, particularly the Posse Comitatus Act. It also sets some requirements for EOD support to civil law enforcement agencies that could affect military doctrine. DoDD 3025.21 states that in an immediate response situation, the closest unit regardless of branch of service will respond.¹⁹⁸ If the immediate response forces are not sufficient to handle the situation as the Phase 1 review of the Boston Marathon Bombing suggests is possible, the additional requested EOD assets could be from a different branch of service with a different chain of command. However, the only U.S. military EOD joint doctrine publication covering EOD DSCA missions, JP 3-42, does not address command or organization structure for a joint EOD DSCA response when there is not an established JTF.¹⁹⁹

DoDD 3025.21 also calls for GCCs, USNORTHCOM in the case of CONUS, to track EOD civil law enforcement support missions and consolidate EOD reporting.²⁰⁰ This is an easy process for routine support missions without extreme time sensitivity issues; these reports can be processed and sent through the EOD unit's parent chain of command to USNORTHCOM. However, the dynamics of an evolving IED campaign, as suggested by the Boston Marathon Bombing response, would presumably have a reporting timeline that dictates a direct command and reporting link from responding EOD units to ARNORTH as the JFLCC for CONUS and ultimately to USNORTHCOM, the GCC. Joint DSCA doctrine provides some insight into command structures that could provide that link in situations where a USNORTHCOM JTF has not been established.²⁰¹ However, joint EOD doctrine provides no suggestion of how to establish a command structure for a complex DSCA response without a JTF headquarters.²⁰²

Lastly, the DoD does not have a policy directive that consolidates legal guidance pertaining to CONUS EOD response from Titles 18 and 42 with DOD policy from DoDD 3025.18 and 3025.21. All legal and policy requirements governing EOD response in CONUS are contained in multiple documents.

Phase 2 Doctrine Analysis

Both categories of military doctrine examined in this study, DSCA and EOD, adequately address the national laws and policies applicable to EOD DSCA missions in support of civil law enforcement agencies. However, the only joint EOD doctrine publication that addresses DSCA support or support to civil law enforcement, JP 3-42, is extremely vague on how to conduct joint operations in a DSCA environment and

provides no guidance on how EOD units should integrate into a civil authority command structure for a large-scale DSCA mission.²⁰³ It also does not address how to develop interoperability with civil authorities and within the joint force for DSCA support or provide guidance on command or organization structures for joint EOD DSCA operations without a JTF.²⁰⁴ However, JP 3-28 establishes DSCA as a joint mission.²⁰⁵

As discussed in both EOD and DSCA doctrine, there will come a point in a prolonged response to an IED campaign that IRA no longer applies, and a request for forces must be submitted. Forces sourced through the RFA process will fall under the command of USNORTHCOM.²⁰⁶ EOD forces in this situation will need a command and reporting link back to USNORTHCOM. As laid out in JP 3-28, the overall command of the DSCA response will fall under either a federal or dual status JTF or, in the case of a limited federal response, the Defense Coordinating Officer can assume command.²⁰⁷ In a multi-state response, there is potential for a dual status JTF in each state and the appointment of a DCO for each state as well.²⁰⁸ If this is case, an EOD liaison element could be needed at each of these commands as well as liaison elements at the FBI JFO or BMC.

Civil emergency response doctrine in the form of NIMS and NRF is the other major category of doctrine examined in Phase 1. This doctrine does a good job of accounting for a dynamic threat like a developing IED campaign by using ESF that allow civil authorities to quickly categorize and request support assets to counter any threat.²⁰⁹ The overarching themes of flexibility, scalability, and tailorability found throughout NRF and NIMS allow the size of response operations to grow in scale to match the size of any disaster or other threat. These themes also allow for integration of

military assets into the command structure as needed.²¹⁰ Flexibility and scalability are made possible through the standardization of emergency response command structures, common terminology, and standardization of operations.²¹¹

When comparing joint EOD DSCA doctrine with civil emergency response doctrine, the need for more detailed guidance in joint EOD doctrine becomes apparent. One of the major tenets of NIMS is standardization.²¹² Joint EOD doctrine states that DSCA operations should be conducted in accordance with NIMS, but all four military services have to rely on their respective service's doctrine for guidance on EOD DSCA missions.²¹³ More detailed joint EOD doctrine would be more in line with the NIMS' standardization concept. In addition, NIMS has five components: resource management, preparedness, communications and information, command and management, and ongoing management and maintenance.²¹⁴ One aspect of resource management is credentialing or certifying personnel for response.²¹⁵ Single service EOD doctrine lays out the certifications that military EOD personnel must have for DSCA response, but joint EOD doctrine does not provide standardized guidance on this subject to the joint force.²¹⁶

Comparing Phase 1 doctrine results with Phase 1 practice results one can see that U.S. military EOD has issues with the other three components of NIMS as well. Preparedness is a major factor in emergency response operations under NIMS, but there is only one major joint interagency interoperability exercise in existence, Raven's Challenge.²¹⁷ Raven's Challenge is conducted about five times annually.²¹⁸ Thus, not all military EOD units get the opportunity to participate in this exercise to build preparedness and interoperability with civil emergency responders.

The Boston Marathon Bombing response showed that the military's reliance on cell phones as a primary means of communication is problematic during a major event.²¹⁹ Joint EOD doctrine does not address communications capabilities for EOD DSCA missions, but single service doctrine from the Army confirms cell phones as a primary means of communications for CONUS response missions.²²⁰

Command and management is another component of NIMS on which joint EOD doctrine could improve guidance. One aspect of this component is span of control. The span of control concept of command and management holds that no supervisor in a NIMS organization should manage more than three to seven personnel.²²¹ This is partly why joint EOD doctrine should address a command structure for a joint EOD DSCA response. If EOD assets from more than one service respond to the same incident, as happened during the Boston Marathon Bombing, civil authorities should not have to interface with more than one command element for military EOD support. As noted during 79th Ordnance Battalion (EOD)'s AAR from Raven's Challenge X, additional military personnel in a civil authority command center, especially the BMC, can make integration problematic.²²²

Phase 2 Training and Operations Practice Analysis

Military EOD integration into a civil authority command center has proven problematic in training and actual operations. The vagueness of joint EOD doctrine could be a factor. AARs indicate that military EOD's role within the FBI's BMC was confusing for both 63d Ordnance Battalion (EOD) and 79th Ordnance Battalion (EOD) during two separate Raven's Challenge Exercises.²²³ Likewise, JTF-MA initially struggled with understanding 387th Ordnance Company (EOD)'s role in the Boston Marathon Bombing

response.²²⁴ Raven's Challenge X was the first series of military EOD and PSBS interoperability exercises that incorporated the BMC, and the Boston Marathon Bombing was the first time TF Patriot oversaw a company size DSCA response mission. Given these situations, some initial confusion is to be expected, but the training and operational experiences indicate a need for clear joint EOD doctrine on the integration of EOD units into a large-scale civil emergency response mission.

The cross comparison of AARs from Raven's Challenge and the Boston Marathon Bombing with doctrine is fairly straightforward. There is little to no mention of laws, policy, or strategy in AARs from either Raven's Challenge or the Boston Response. Consequently, there is no useable data on which to base a cross content comparison. Because the areas were not highlighted as shortfalls, it is reasonable to assume that existing national laws, policy, and strategy are sufficient for EOD DSCA response to an IED campaign due to the absence of issues related to these categories in AARs.

Phase 2 Cross-content Analysis Summary

The following information comprised the initial conclusions obtained from the Phases 1 and 2 analysis of the five source categories: threat analysis, law, policy and strategy, doctrine, and practice. These initial conclusions were carried forward into the interpretation phases of the D-A-I method where they were examined through the lens of DOTL-P to develop conclusions and help answer the primary research question.

The cross-content comparison of threat analysis, law, policy and strategy, doctrine, and practice showed only limited conflict between the five source categories that could negatively impact a federal military EOD response to an IED campaign in

CONUS. For the most part all categories of source data proved to be mutually supportive of a U.S. military EOD response to assist civil authorities to counter an IED campaign.

Policy in PPD-17, *Countering Improvised Explosive Devices*, concurs with the threat analysis that IEDs are a significant threat to the U.S. homeland. The whole-of-government approach set forth in policy and strategy shows that national level leadership understand the seriousness of the threat and suggests that federal military assets may be required to counter an IED threat in CONUS. Lessons learned from the Boston Marathon Bombing confirm that large-scale IED attacks have the propensity to overwhelm PSBS capacity for response operations requiring a military EOD response for assistance even from a single attack. Therefore, a series of coordinated attacks could certainly warrant an extensive military EOD response. National law enables this type of response, but with limiting factors. For example, the Posse Comitatus Act prohibits military EOD from collecting evidence or enforcing security cordons at incident sites as they would during overseas contingency operations.

The major disagreement among source categories is in doctrine, specifically joint EOD doctrine. Civil emergency response doctrine including NIMS, NRF, and TILEIA all provide very clear guidance on how to organize response operations to a wide range of emergency situations, including terrorist incidents. These documents also discuss how to integrate federal military assets into the response structure. Military DSCA doctrine and policy apply NIMS and NRF to the joint force and establish DSCA as a joint force mission. However, joint EOD doctrine lacks guidance on how to establish C2 for a joint EOD DSCA response when EOD assets from multiple services are operating under IRA and their parent chains of command still hold OPCON. Joint EOD doctrine also does not

provide clear guidance how joint force EOD units should integrate with civil authorities. EOD units must rely on single service doctrine for guidance. This is not in keeping with the principle of standardization in NIMS and violates the tenets of joint DSCA doctrine as well as policy guidance in DoDD 3025.18.

Additionally, the Phase 2 cross-content analysis answered some of the secondary research questions. A number of secondary research questions were answered during the Phase 1 analysis, but the following secondary research questions can be answered by Phase 2 analysis:

1. What are the C2 requirements including manning and training for a joint EOD response to assist civil law enforcement in countering a sustained IED threat in CONUS if a USNORTHCOM JTF is not established?

As with any response conducted within NIMS, a command structure for an EOD DSCA response should be scalable and tailorable to fit the size of situation and based on the concept of span of control. For example, current doctrine indicates that an Army EOD company can C2 one to five platoons.²²⁵ If the response becomes larger than a company can C2 then a next level headquarters should assume command, an EOD battalion in the Army's case. However, the number of liaison teams that must be employed at various command centers should also be considered. If the requirement exceeds a company/flight/Marine platoon manning capabilities then a higher headquarters may be required to fill these leadership positions. If an EOD DSCA response becomes a joint operation, serious consideration should be given to deploying an Army battalion/Navy mobile unit/Marine company headquarters or portion thereof to lead the response. Joint

EOD doctrine lacks guidance on organization for a joint EOD DSCA response without a JTF commander to appoint a lead service for EOD operations.

TF Yankee recommended FEMA IS 100, 200, 300, 700, and 800 training for all liaison officers. A battalion level staff or company headquarters element leading a prolonged DSCA response could benefit from this training. Additionally, training on the practical application of integration with civil authority command structures appears to be an existing shortfall. Complications were identified in Raven's Challenge AARs from both 63d and 79th EOD Battalions as well as by TF Patriot in the JTF-MA AAR. EOD units from all services could benefit from increased interoperability exercises with civil response personnel at the tactical and operational level.

Insufficient data exists to determine the manning and training requirements for EOD liaison elements integrating into civil authority command centers. 79th EOD Battalion's Raven's Challenge AAR mentions having too many personnel in the BMC, but fails to mention how many personnel were involved or make a recommendation on how many military EOD personnel should be involved in BMC operations. A reasonable conclusion is that one to two personnel at any given time would be appropriate, but more observation in a field environment is required to produce a sufficient data to make a recommendation. The training requirements for military EOD personnel integrating into a civil authority command structure were not addressed in the Raven's Challenge AARs, but the recommendation for FEMA IS training from TF Yankee after the Boston Marathon Bombing seems applicable here as well.

2. What are the decision points to transition from immediate response for an initial IED incident to the establishment of a JTF as the incident escalates into a sustained IED campaign in CONUS?

Phase 2 cross-content comparison of doctrine and policy applied to a hypothetical situation (Annex B) identified four decision points common to any joint EOD DSCA response to a developing IED campaign between initial response and the establishment of a USNORTHCOM JTF. Specific situations may call for additional decision points, but the four identified here should be common to all situations similar in nature to the one examined in this study.

The first decision point as suggested in ATP 4-32 occurred when the situation escalated to the point that requirements exceeded immediate response force capabilities. In the hypothetical situation in Annex B, the EOD unit only had a primary and secondary team dedicated to immediate response. Once these assets were exhausted, civil authorities had to make the decision, with recommendation from the EOD company commander, to look elsewhere for immediate response capabilities or submit an RFA for additional forces.

The second decision point in the hypothetical situation occurred when EOD assets from multiple federal military services and units responded under IRA. There was no unity of command among the military EOD assets and the JOC began to experience coordination issues with military EOD personnel due to interfacing with multiple personnel.

The third decision point occurred at the 72-hour limit on IRA prescribed in DoDD 3025.18. At this point, the SECDEF had to make the decision to waive the 72-hour

requirement and allow EOD units to continue operations under IRA, discontinue support to civil authorities, or require an RFA for continued support.

The final decision point occurred once an RFA for prolonged EOD support was submitted and EOD forces transitioned OPCON from their parent units to USNORTHCOM. In this situation, USNORTHCOM would likely delegate OPCON to the JFLCC, ARNORTH. The ARNORTH commander had to decide whether to establish a JTF, either federal or dual status, or delegate command to the DCO of the affected FEMA region.

Interpretation

Introduction

This section applies the initial conclusions derived from Phases 1 and 2 analysis to the analytical framework of doctrine, organization, training, leadership and education, and policy (DOTL-P) to derive final conclusions that answer the primary research question. The DOTL-P analytical framework was derived from the DoD's JCD process, which uses the components of doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy (DOTMLPF-P) to develop new or improve existing joint force military capabilities.²²⁶ For reasons discussed in Chapter 3, this study does not focus on the materiel, personnel, or facilities components of DOTMLPF-P. DOTL-P also serves as the organization for this section which will devote a sub-section to each component followed by a summary of final conclusions and an answer to the final unanswered secondary research question: what Doctrine, Organization, Training, Leadership, and Policy (DOTL-P) solutions are required to enable C2 of U.S. military EOD forces in response to a sustained IED campaign in CONUS?

Doctrine

Examining the initial conclusions from the Phase 1 and 2 analyses through a doctrinal lens reveals that current doctrine would not lead to mission failure if an IED campaign develops in CONUS requiring a prolonged DSCA response from U.S. military EOD units. Civil authority response doctrine and military DSCA doctrine both provide robust guidance that allows EOD leaders and planners to understand the construct of a civil authority response as well as the legal and policy restrictions placed on federal military support to civilian government agencies.

However, EOD doctrine could benefit from added detail and guidance. Single service EOD doctrine is sufficient in applying EOD and DSCA principles to the separate services. Joint EOD doctrine from JP 3-42, on the other hand, is sufficient for the planning of EOD DSCA operations in that it covers the laws and policies that apply to EOD support to civil law enforcement. The shortfall in JP 3-42 is that it lacks clarity in how to conduct EOD DSCA response, and does not provide any guidance on how to organize a joint EOD response under IRA. Additionally, JP 3-42 does not provide guidance on how to integrate into a civil authority command structure through local authority EOCs, FBI JOCs/JFOs, or through a BMC. EOD units could most likely conduct a joint emergency response and successfully complete the mission using JP 3-42, but initial integration with civil authorities would likely be problematic as shown by Raven's Challenge exercises and the Boston Marathon Bombing response. Coordination with and reporting to a civil authority command center's operations section through a separate EOD representative from each of the sister services could cause a great deal of unnecessary initial confusion for the supported agency. The U.S. military EOD

community could benefit from further development of joint doctrine on EOD support to civil law enforcement agencies.

Organization

Phase 1 and 2 analysis did not identify any issues with the organization of U.S. military EOD units that would hinder their ability to respond to a prolonged IED campaign in CONUS. Chairman of the Joint Chiefs of Staff Instruction (CJCSI 3010.02), *Guidance for Developing and Implementing Joint Concepts*, is the document from which the DOTL-P analytical framework was derived. This document describes “organization” as, “the way the joint force organizes to accomplish missions, execute functions, and deliver, support, or sustain joint warfighting capabilities.”²²⁷ In this regard, EOD units from each of the joint services are organized to execute missions, including support to law enforcement, in a scalable and tailorable manner with consideration to span of control as NIMS prescribes. EOD missions are executed at the team/section/platoon level with platoon, company, battalion, mobile unit, and group headquarters to provide C2 based on the number of subordinate units involved in the mission; doctrinal organizations for each separate service are depicted in JP 3-42.²²⁸ Figure 5, from JP 3-42, shows the echelons of command for U.S. Army EOD units, but JP 3-42 shows that EOD forces from all services of the U.S. military are echeloned similarly.²²⁹

Explosive Ordnance Disposal Force Structure Allocation

Organization	Basis of Allocation	Supported Organization	Relationship
	1 per Theater Army 1 per Corps 1 per Joint Task Force 1 per Combined Joint Task Force 1 per Homeland Defense 1 per 2-7 EOD Battalion	Theater Army Corps Joint Task Force Combined Joint Task Force	Attached or OPCON Attached or OPCON OPCON OPCON
	1 per Division 1 per Joint Task Force 1 per Combined Joint Task Force 2 per Homeland Defense 1 per 3-7 Army EOD Companies 1 per 3-7 Sister Service EOD units	EOD Group Division Joint Task Force Combined Joint Task Force	OPCON DS or GS DS or GS DS or GS
	1 per BCT 1 per SFG(A) 1 per Ranger Regiment 9 per Homeland Defense 1 per 1-5 EOD Platoons	EOD Battalion BCT MEB SFG(A) Ranger Regiment	OPCON DS or GS DS or GS OPCON or TACON OPCON or TACON
	1 per Maneuver Battalion 1 per Special Forces Battalion 1 per Ranger Battalion 24 per Homeland Defense 1 per 3 EOD teams	EOD Company Maneuver Battalion Special Forces Battalion Ranger Battalion	Assigned DS or GS DS or GS DS or GS

Figure 5. U.S. Army EOD Force Structure

Source: Joint Chiefs of Staff, Joint Publication 3-42, *Joint Explosive Ordnance Disposal* (Washington, DC: Government Printing Office, September 2016), accessed April 8, 2017, http://dtic.mil/doctrine/new_pubs/jp3_42.pdf, B-2.

Based on the force structure for joint EOD forces in JP 3-42 and its ability to meet the requirements of NIMS; the researcher concluded that no organizational changes are required for U.S. military EOD forces to respond to a sustained IED threat in CONUS. Though not related to the description of organization in CJCSI 3010.02, the existence of echeloned units for C2 does not always mean that all those units will be available to provide personnel for a response to civil authorities. These units also conduct overseas contingency operations and other missions that may limit availability for response to an IED campaign in CONUS.

Training

Phase 2 analysis identified two areas where joint force EOD units can improve training to better prepare for a prolonged response to an IED campaign in CONUS: interoperability exercises and civil emergency response doctrine training. Continued or increased interoperability exercises between military EOD units and civil emergency response personnel such as the Raven's Challenge exercise could greatly increase readiness to respond to an IED campaign in CONUS. Both 63d Ordnance Battalion (EOD) and 79th Ordnance Battalion (EOD) touted Raven's Challenge as a great training exercise that allowed for the sharing of TTPs between military units and civil law enforcement organizations.

EOD leadership and liaison personnel could benefit from completing FEMA courses on how to implement NIMS and NRF as well as the structure of the ICS. As noted by 26th MEB, TF Yankee, in the JTF-MA AAR for the Boston Marathon Bombing, liaison personnel would have had a better understanding of their roles and responsibilities within the response network if they had completed FEMA approved training such as IS 100, 200, 300, 700, and 800. Adding these certifications as a requirement for senior military EOD personnel would improve their ability to liaise with and integrate into civil authority command structures during a prolonged response mission.

Leadership and Education

The leadership and education component of the JCD process deals with professional military education (PME) that must be completed by officers and non-commissioned officers (NCO) at various states of their careers.²³⁰ None of the data from

the Phase 1 and 2 analysis specifically identified the professional education of military leaders as an issue that could hinder an EOD response to an IED campaign in CONUS. However, the platform of PME could help improve some of the issues identified in the above training portion of the data interpretation. Incorporating civil emergency response doctrine training and other courses on integrating military assets into tactical and operational level civil command structures could better prepare mid-level EOD leaders to integrate into a large-scale civil response to an IED campaign.

Policy

The policy component of JCD deals with joint policy at the DoD level that drives changes in capabilities and methods of operation for the joint force.²³¹ Examining Phase 2 data through this lens proved national and DoD policy sufficiently supports a federal military response to an IED campaign in CONUS. DoDD 3025.18 clearly communicates national law and DoD guidance for the conduct of EOD missions in support of civil authorities. Likewise, DoDD 3025.21 clearly articulates the roles and limitations for EOD units supporting civil law enforcement operations.

A potential shortfall in DOD policy is the lack of a single DoDD governing EOD response in CONUS. Policy guidance and legal requirements related to EOD CONUS response are contained in multiple source documents. DOD does not have a published directive that consolidates guidance for EOD operations in CONUS.

DOTL-P Interpretation Summary

The examination of the Phase 1 and Phase 2 analysis described in chapter 3, through the analytical framework of DOTL-P from the JCD process, provided

triangulated and therefore reliable indications regarding the readiness of military EOD units to C2 EOD forces to counter a sustained IED threat in CONUS. This analysis of data answers the final secondary research question: what Doctrine, Organization, Training, Leadership, and Policy (DOTL-P) solutions are required to enable C2 of U.S. military EOD forces in response to a sustained IED campaign in CONUS?

The U.S. military's joint force would benefit from more detailed joint EOD doctrine covering DSCA, especially doctrine that clarifies guidance on the organization of a joint EOD response under IRA and EOD integration with civil authority command structures. EOD personnel would benefit from increased opportunities for interoperability training with joint and interagency partners. EOD leadership and liaison personnel would be better prepared to support civil authorities by completing FEMA certification courses to become more familiar with the tenets of NIMS and NRF. These courses could be added to PME course curriculum to improve the professional development of EOD officers and NCOs. The publishing of an EOD CONUS response policy directive from DoD would consolidate legal requirements and policy guidance from multiple sources and provide an all-inclusive source document regarding CONUS EOD operations, training, and certification requirements for the joint force. This study did not identify any organizational changes, as defined by the JCD process that could improve the readiness of EOD units to conduct prolonged DSCA support to counter an IED campaign in CONUS.

Conclusion

These conclusions were derived from a plethora of threat analysis studies, national laws, national policy and strategy, multiple forms of military and civil agency

doctrine, and reviews of practical application through the deliberate process of describe, analyze, and interpret.²³² Cross content comparison of sources identified trends related to each category that could be interpreted through an analytical framework consisting of components of the JCD process to identify areas of improvement for joint force EOD units. Improvements in these areas would better prepare the joint force for a never-before-seen threat to the U.S. homeland, a prolonged and sustained IED terror campaign. The conclusion derived from this deliberate process will be used in the following chapter to answer the primary research question: how well are U.S. military EOD units prepared to effectively C2 the deployment of EOD forces in support of civil law enforcement to counter an IED terror campaign in the United States as it develops from an initial incident to a sustained threat requiring the establishment of a USNORTHCOM JTF?

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³ Smith, Damphousse, and Roberts, 4.

⁴ Ibid., Abstract.

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⁶ Smith, Damphousse, and Roberts, 270-352.

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CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The intent of this study was to determine whether U.S. military EOD units are prepared to C2 EOD forces assisting civil law enforcement operations to counter a sustained IED threat in the United States. Specifically, this study examined the period of escalation from an initial bombing incident to a fully sustained, prolonged campaign. U.S. military EOD involvement to counter this threat will most likely begin with a response to an isolated incident under initial response authority and will grow to include multiple EOD teams (potentially from multiple services) providing long-term support to civil authorities over multiple jurisdictions. The intended outcome of this study was to determine how U.S. military EOD units will C2 forces through the escalation process and integrate into civil authority command structures to lay the groundwork for the establishment of a USNORTHCOM JTF to counter the threat should the problem rise to a level that requires a JTF to lead DoD efforts. To assess the readiness of EOD units to perform this mission, a threat analysis was conducted to determine the probability of such a threat developing in the United States. This date was then compared to national law, policy and strategy, doctrine, and AARs of training and operations to obtain initial conclusions. These conclusions were then examined through the lens of the doctrine, organization, training, leadership and education, and policy components of DoD's Joint Capabilities Develop Process to provide a final assessment of the joint EOD force's readiness to C2 forces through the escalation process of a sustained IED threat in CONUS.

This chapter begins with a summary of the findings from this study and an interpretation of the final conclusive data including a proposed answer to the primary research question and the implications of that answer on the joint EOD force: how well are U.S. military EOD units prepared to effectively C2 the deployment of EOD forces in support of civil law enforcement to counter an IED terror campaign in the United States, as it develops from an initial incident to a sustained threat requiring the establishment of a USNORTHCOM JTF? This interpretation is followed by unexpected findings resulting from the research, areas for further study that explore more in-depth questions regarding the ability of the joint EOD force to respond to a sustained IED threat in the United States, alternate research methods to further study the primary research question, and recommendations for immediate action to improve EOD readiness to counter this threat.

Summary of Conclusions

Phase 1 analysis revealed that the development of a sustained IED campaign in the United States is a credible threat. The existence of numerous terror groups and actors that have shown propensity to utilize explosives to further their extremist ideals combined the availability of IED materials and construction information has already proven to be a threat. The advent of social media and increasing access to emerging technology including encrypted communications increases the likelihood that a coordinated IED effort could develop in the United States.

To assist civil authorities in countering this threat, the joint EOD force would benefit from the development of more extensive doctrine on support to civil law enforcement agencies. Existing joint doctrine provides little guidance on support to civil authorities outside of naming the applicable national laws and DoD policies. The greatest

shortfall in joint EOD doctrine is guidance on the integration of EOD units, including command elements, into civil authority command structures: local and state EOCs, FBI JOCs or JFOs, and BMCs. In addition, joint EOD doctrine does not discuss establishing unity of command and unity of effort during a joint EOD response under IRA. Further, the certifications required for EOD personnel to serve as emergency responders are not codified in joint EOD doctrine. This lack of doctrine creates potential for a significant lack of standardization across the joint force for CONUS response operations.

EOD units of all services would benefit from increased interoperability training with joint and interagency partners as well as more CONUS response training for EOD teams. Currently, only one major joint-interagency EOD exercise, Raven's Challenge, is conducted annually. This single exercise is conducted in at least five locations around the country, but still cannot incorporate all military EOD units who may be called on to respond to an escalating IED threat. Some of this training could be conducted at PME schools for EOD leadership personnel to better prepare them to lead a CIED effort in support of civil authorities.

Publication of a DoDD on CONUS EOD response would also improve standardization of joint force EOD units by consolidating existing legal and policy requirements governing EOD response missions in CONUS. Currently, the laws and policies that apply to CONUS EOD response are scattered throughout national law and DOD DSCA policy. Consolidation of these laws and policies into one policy directive would aid commanders in maintaining EOD unit readiness to support civil authorities.

Lastly, the DOTL-P interpretation of the analyzed data revealed that current unit organization is sufficient to enable the joint EOD force to support civil authorities during

an IED campaign in CONUS. This study could find no reason to change existing force structure.

The conclusions lead to the following answer to the primary research question: how well are U.S. military EOD units prepared to effectively C2 the deployment of EOD forces in support of civil law enforcement to counter an IED terror campaign in the United States as it develops from an initial incident to a sustained threat requiring the establishment of a USNORTHCOM JTF?

From a C2 standpoint, the U.S. military joint EOD force is adequately prepared to accomplish this mission. Units may experience initial friction as seen during Raven's Challenge and 387th EOD Company's response to the Boston Marathon Bombing. Though joint doctrine may be lacking, single service doctrine provides enough guidance that units can successfully complete the mission. Current organizational structure allows flexibility for EOD commanders to tailor the necessary force needed to support civil authorities. Additionally, lack of training on civil authority response doctrine will likely hamper initial integration into a civil authority command structure, but on-the-job experience gained during the response will likely relieve this friction enough to achieve mission accomplishment.

Unexpected Conclusions

The greatest unexpected conclusion of this study was the lack of joint EOD doctrine compared to the completeness of single service EOD doctrine for support to civil law enforcement in the United States. The initial expectation for this study was that both joint and single service doctrine would need adjustment. The study showed that single service doctrine was sufficient but could use minor changes, while joint EOD doctrine for

support to civil law enforcement is almost nonexistent. This is surprising, given the emphasis placed on DSCA as a joint force mission in DoD policy.

Recommendations for Further Study

The Materiel lens of DOTMLPF-P was not part of this study design, but materiel solutions to improve joint force EOD readiness to respond to a sustained IED threat in CONUS deserves study, especially solutions that increase interoperability with first responders. The JTF-MA AAR of the Boston Marathon Response identified major issues with military table or organization and equipment military vehicles used for EOD response. EOD emergency response vehicles are typically limited in number at each military installation with an EOD unit. This could be an area that causes a major shortfall for force projection of EOD forces during a prolonged response to an IED campaign. As mentioned during the Phase 1 and 2 analysis, back-up communications systems could be a potential area for a materiel solution so that EOD teams do not have to rely solely on cellular phones for communication with civil authorities during response operations.

Another area identified for further study is the availability of EOD forces to conduct a large-scale prolonged support to a civil law enforcement mission. The limited number of EOD units and competing priorities for overseas contingency operations could limit the number of EOD teams available to support a CIED campaign in the United States. Further research could determine to what extent EOD would be support this mission. Research in this area could also examine whether creating dedicated, echeloned EOD response forces similar to the CBRN Response Enterprise is a practical and feasible solution to this problem.

Study into the sustainment of forward deployed EOD forces is another topic requiring further study. JTF-MA did not mention sustainment issues with the 387th EOD Company's response in Boston, but they also responded from a somewhat local location and operated for less than one week. The forward deployment of federal EOD forces for an extended amount of time would potentially be problematic from a Class III (fuel) and Class V (ammunition and explosives) supply standpoint. Included in the Class V issue is security at a forward deployed location in CONUS. In addition, most EOD personnel utilize government travel cards for food and lodging on extended missions. If this solution is used for a prolonged mission to support civil law enforcement units could quickly run into budget issues with operations and maintenance funds.

Recommendation for an Alternate Research Approach

If another study to answer the primary research question were to be conducted, it should be done in the form of a case study of the involvement of 387th EOD Company and the active duty Navy EOD team in the response to the Boston Marathon Bombing. The information on their involvement came to light too late in the research process for this project to do an in-depth case study. However, a study of this nature complete with interviews of individuals involved in the response could shed a great deal of light on areas for improvement for the joint EOD force.

Recommendations for Immediate Action

The joint staff should develop more comprehensive EOD doctrine for support to civil law enforcement. This could be accomplished by adding to existing doctrine in JP 3-42, but the development of a separate multi-service tactics, techniques, and procedures

manual on EOD support to civil law enforcement would likely prove more useful for tactical level EOD formations. This doctrine should include the organization of various civil authority command structures including the BMC as well as best practices for the integration of EOD forces into a large-scale civil authority response mission.

Additionally, this doctrine should standardize and codify the credentialing and certification requirements for joint force EOD personnel conducting emergency response in CONUS.

JP 3-42 should also provide clarifying guidance on the organization and command structure for a joint EOD response under immediate response authorities in the event that EOD units from multiple services respond to the same large-scale incident.

Understandably, this may be a difficult proposition as each service would be operating under OPCON from their parent chain of command, but research for this study suggests that a lead service structure with one service exercising control over the entire mission could improve interoperability and integration with civil authorities. However, the joint services may feel that a parallel structure with separate command channels and coordinating relationships between the services is more acceptable until a JTF is established. Either way, this should be codified in doctrine rather than sorted out on a live incident site.

To help resolve some of the training and integration issues identified in this study, the joint EOD force needs more opportunity for interoperability training with joint and interagency partners. EOD units from all services could benefit from a policy mandating an annual or bi-annual requirement for battalion level (or equivalent) and below EOD units to complete a joint-interagency interoperability exercise as a credentialing

requirement for stateside emergency response. This requirement may require an increase in funding for EOD training, but increased involvement of EOD units in local emergency response exercises could help meet this requirement with little added cost. Ultimately, an expansion of Raven's Challenge or the organization of similar exercises in addition to Raven's Challenge would likely have a significant impact on EOD readiness for stateside response missions.

Another requirement that would improve joint EOD readiness to integrate with civil authorities is the certification of EOD leaders to fill EOD command and liaison positions within a civil authority command structure. At a minimum FEMA IS 100, 700, and 800 courses should be added to the EOD team leader certification process. Ideally, all EOD personnel in the rank of E-6 and above should complete FEMA IS 100, 200, 700 and 800. These courses would enhance leaders' knowledge of how civil authority command structures are organized and how military EOD forces would integrate into a civil authority command center. These courses can be completed online with no added cost to DoD. Courses involving the practical application of this information should be added to PME for all EOD personnel in the rank of E-6 to O-3 to increase their professional knowledge and competence on large-scale CONUS response missions.

DoD should publish a DoDD for CONUS EOD operations to consolidate policy guidance into a single document. This policy should incorporate the Posse Comitatus Act, Stafford Act guidance, policy guidance from both DoDD 3025.18 and 3025.21, and credentialing requirements for first responders. A clear and consolidated policy document on CONUS EOD response would benefit EOD commanders and staffs as well as military DSCA and civil emergency response planners.

Summary and Conclusion

Overall, the most important outcome of this study is that the joint EOD force is capable of commanding and controlling EOD forces within a civil authority command structure to protect the U.S. homeland from an IED terror campaign. Even if improvements to joint doctrine and training are not made, the U.S. military will still be able to accomplish this mission. Initial response operations and integration will likely be problematic but not to the point that issues cannot be overcome. However, development of comprehensive joint doctrine and increased training on commanding and controlling a joint, multi-jurisdictional EOD response to a dynamic, evolving IED campaign in CONUS will greatly increase the joint force's readiness to protect the people of the United States.

APPENDIX A

HYPOTHETICAL RESPONSE TO AN ESCALATING IED CAMPAIGN IN CONUS

Based on the raw data from the Phase 1 and 2 analysis, this section provides a very brief and overview of how a U.S. military EOD response to an IED campaign in CONUS could develop. Every emergency response situation is unique. Civil emergency response doctrine is based on flexibility and scalability for this reason. To maintain that flexibility, this section will cover, in generalities, the actions, and decision points of a response to a dynamic and evolving IED threat. The actions and decisions included in this section are event based versus time based and are presented roughly in sequential order. This scenario will begin with a call for assistance under IRA and end with the establishment of an ARNORTH JTF.

1. Two bombs detonate on the second day of a weeklong outdoor music festival in a suburb of a major metropolitan city killing several people and wounding over one hundred.
2. Local authorities respond. Including the local PSBS teams (six teams) who are quickly overwhelmed with the scale of the scene. Scores of discarded bags and other items that could contain additional explosive devices were dropped as people fled the scene, and multiple vehicles in vicinity of the festival have been identified as containing suspicious items inside by responding law enforcement.
3. Local authorities establish an ICP near the site of the festival and begin to activate mutual support agreements with other local jurisdictions for additional emergency response capabilities including additional PSBS.

4. As the response effort begins to grow, another bomb detonates outside of a government building on the other side of the city.
5. Local authorities request emergency assistance from military EOD at the closest active duty installation, which is two hours away.
6. Recognizing the situation as a high-profile incident, a small command element (may or may not be the company/flight commander) responds under IRA with the on-duty EOD team to a second ICP established at the site of the second attack
7. The state EOC activates, begins to monitor the situation, and provides state level coordination and assistance. In addition, realizing a potential terror attack is unfolding the local FBI field office is establishing a CP to begin organizing a federal law enforcement response in accordance with TILEIA incident annex of the NRF.
8. As the EOD team with the command element is responding to the second incident. A state trooper conducts a traffic stop on a vehicle 30 minutes outside the city and is immediately engaged with gunfire and two pipe bombs which failed to detonate. The trooper kills one attacker and wounds another but discovers the car contains a cache of what appear to be bombs or bomb making materials. The state EOC requests another EOD team to assist.
9. Hours later, the two EOD teams are finishing up when a suspicious bag with smoke emitting from it is found outside of a Jewish community center two blocks from the state capital building, an hour drive from the original attack.

The available bomb squads have responded to the first set of attacks. The FBI CP, now established, requests an additional EOD team.

10. The EOD company/flight commander has both the primary and secondary emergency response capabilities committed to the other incidents. The unit's capacity for immediate response operations is maximized. The commander is now faced with decision point one, whether to recommend that civil authorities submit an RFA for additional EOD support from other installations.
11. Instead, the EOD commander decides to push a third (fresh) EOD team to link up with one of the first two teams and assume their gear and response vehicle and move to the suspicious package incident.
12. Additional calls for attacks and suspicious items begin to come in from across the city and other local cities as well. The EOD command element moves to the FBI CP to get situational awareness and see where the unit can help with the response.
13. EOD teams from other services begin to respond to additional calls and multiple EOD teams from three different services are now involved in the response. All of them are operating under IRA. Multiple EOD unit liaison personnel are now interfacing with the operations section of the FBI CP, which is transitioning to a JOC.
14. Span of control becomes an issue for the JOC and coordination of military EOD assets from the various services is becoming problematic. This is potentially decision point number two. Joint EOD doctrine should provide

guidance on how to establish a lead service to liaison with civil authorities and coordinate military EOD operations while all services are under IRA authorities and parent chains of command still retain OPCON. If specified in doctrine, decision point number two could involve the deployment of a higher (battalion level/mobile unit/Marine company) headquarters also under IRA to assume C2 of the joint military EOD response and liaison with civil authorities.

15. The state National Guard is mobilized under state active duty for security of incident sites.
16. EOD from all services work 12-16 hour shifts for the next three days as more attacks occur and suspicious package calls come in.
17. At the 72-hour mark of EOD support, decision point three occurs. IRA is no longer sufficient. DoD (SECDEF) must decide whether to suspend federal military EOD support to the response, grant a waiver to DoDD 3025.18 allowing IRA to continue past 72 hours, or approve an RFA for continued support and additional assets.
18. The BMC has been established at the FBI JFO and personnel from the EOD battalion command element have integrated into BMC operations.
19. SECDEF approves the RFA for the requested number of EOD teams and enough EOD leadership personnel to C2 elements to man essential command centers for liaison and coordination purposes. This request includes a C2 element for the state EOC, if needed, as well as the BMC at the JFO. All

military EOD assets involved in the response are now under OPCON of USNORTHCOM. USNORTHCOM delegates OPCON to ARNORTH.

20. Decision point number four occurs. ARNORTH must decide whether to delegate command to the Defense Coordinating Officer for the effected FEMA region or establish a JTF.
21. Due to the heavy National Guard involvement and the joint nature of the federal EOD response, ARNORTH establishes a JTF under a dual status commander. The JTF commander designates a lead service for the joint EOD response effort. Military EOD assets organize an EOD task force under a single service lead in accordance with JTF guidance. Liaison elements remain in place at key command centers to provide EOD technical expertise and advice to civil authorities and establish liaison with the JTF staff while EOD teams continue operations.
22. Within the next week, attacks continue within the effected region and begin to occur in two neighboring states. A dual status JTFs is established in each state. Potentially FBI JOCs are established in each state as well. The battalion level military EOD C2 element with the BMC at the JFO helps civil authorities reallocate military EOD assets and ensures that EOD C2 elements are integrated into each state task force.
23. ARNORTH makes the decision to establish a JTF to oversee the multiple dual status command response. ARNORTH initially deploys either its contingency CP or a portion of JTF-Civil Support's CP to temporarily establish C2 until a long-term solution for a JTF headquarters is sourced.

24. ARNORTH establishes JTF-IED to oversee the multi-state response and assume OPCON of the joint EOD task force.

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