

USAWC STRATEGY RESEARCH PROJECT

**CAPTURED ENEMY AMMUNITION IN  
OPERATION IRAQI FREEDOM AND ITS STRATEGIC  
IMPORTANCE IN POST-CONFLICT OPERATIONS**

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## ABSTRACT

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One of the primary lessons learned from Operation Iraqi Freedom (OIF) is that the United States needs to put more emphasis on postwar security strategy and be better prepared for the complex tasks of security and nation building. Captured enemy ammunition (CEA) has significantly impacted operations in Iraq and has hampered US achievement of strategic goals for stability and democracy in the region of the Middle East. Presented are lessons learned from an ammunition officer's perspective related to CEA operations in OIF with applicable recommendations for future operations. Emphasis of the paper is on post-conflict planning and the need for pre-war identification of CEA and its consideration as a factor influencing security and significantly impacting resources in post-conflict operations.



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## CAPTURED ENEMY AMMUNITION IN OPERATION IRAQI FREEDOM AND ITS STRATEGIC IMPORTANCE IN POST-CONFLICT OPERATIONS

From lessons being learned during Operation Iraqi Freedom (OIF), senior US civilian and military leaders must improve future military planning and operations for securing captured enemy ammunition (CEA). This paper will illustrate how the failure to identify and subsequently plan for securing CEA in post-invasion Iraq adversely affected the US' achievement of its strategic goals of winning the "hearts and minds" of the Iraqi people and establishing Iraq as a stable democratic state. This paper will conclude with recommendations to improve current military strategy for handling captured enemy ammunition and preventing it from falling into the wrong hands in future operations.

### **BACKGROUND**

During the final week of the 2004 presidential campaign, unaccountable explosives in Iraq became one of the dominant issues for heated exchanges between President George W. Bush and his presidential challenger Senator John Kerry. The report that initiated the exchanges concerned the disappearance of 377 tons of explosives from the Al Qaqaa storage facility south of Baghdad. The International Atomic Energy Agency (IAEA), which is the United Nations' watchdog agency for nuclear matters, said that their inspectors had seen the Al Qaqaa explosives in January 2003 and had affixed IAEA seals on the bunkers. By the time US soldiers showed up on 10 April, the explosives had disappeared. The specific explosives were deemed important by the IAEA because they could be used to manufacture the high-explosive component of nuclear weapons. Senator Kerry used the report to ratchet up his criticism of President Bush's alleged mismanagement of the Iraq war in general and specifically, President Bush and Secretary of Defense Rumsfeld's alleged failed planning for the war's post-conflict phase. Senator Kerry along with other opponents of the Bush administration alleged that the missing explosives were looted and that the looting could have been prevented if the Pentagon had planned better. Senator Kerry asserted that had there been adequate US soldiers deployed in readiness to safeguard critical storage sites after the "major combat" operations in Iraq, the looting of weapons and ammunition storage sites could have been kept to a minimum. Instead the looting provided Iraqi insurgents with the means to carry out massive and deadly attacks against coalition forces.

The 377 tons of missing explosives at center stage during the final days of the presidential election were only a fraction of the weapons related materiel that has disappeared in Iraq since the US invasion. Even though the 377 tons of missing explosives had a weapons of mass

destruction (WMD) connection, “there is something truly absurd about focusing on 377 tons of rather ordinary explosives, regardless of what actually happened at Al Qaqaa,” according to Anthony Cordesman, a senior analyst at the Center for Strategic and International Studies. “The munitions at Al Qaqaa were at most around 0.06 percent of the total.”<sup>1</sup>

### **WEAPONS, AMMUNITION EVERYWHERE, FREE FOR THE TAKING**

US military commanders in autumn 2003 estimated that Iraqi military sites contained 650,000 to one 1,000,000 tons of various types of munitions and that Al Qaqaa was one of 130 known weapon and ammunition storage sites in Iraq.<sup>2</sup> This did not include over 10,000 cache sites throughout Iraq that coalition forces have uncovered, destroyed, and marked for storage or destruction since the fall of Saddam Hussein’s regime. Before the invasion by coalition forces, Saddam’s military took significant quantities of ammunition from the permanent depots and ammunition storage points (ASPs) and established caches of ammunition throughout the country, predominately in residential areas including mosques, hospitals, and schools, knowing that coalition forces would not strike civilian areas. “Every school, every hospital we go in we find weapons and ammunition,” said COL Boltz of the Army’s V Corps. “Every town with a population of over 30,000 had large amounts of ammunition stored in it.”<sup>3</sup> In Baghdad alone, the 3rd Infantry Division by the end of April 2003 had already removed 3.1 million small-arms rounds, nearly 13,700 grenades, 50,000 rocket propelled grenades (RPG), 7,700 artillery rounds, and nearly 19,000 mines. Along with the ammunition the unit found an assortment of weaponry that included 25,000 rifles and pistols, 286 mortar tubes, as well as 26 tanks. These numbers represent only a fraction of the amount of arms and ammunition that would be found and to some extent is still being found in Iraq today.<sup>4</sup> As of July 2004, 9,758 Iraqi munitions caches had been found and scheduled for destruction.<sup>5</sup>

### **SECURING THE AMMUNITION**

Securing the vast amounts of ammunition after the fall of Baghdad became one of the more daunting missions faced by coalition forces. Army General John Abizaid, Commander, US Central Command (USCENTCOM), testified before the US Senate in September 2003: “there is more ammunition in Iraq than anyplace I’ve ever been in my life, and it’s not securable. I wish I could tell you that we had it all under control. We don’t. There are certainly not enough forces anywhere to guard the ammunition in Iraq.”<sup>6</sup> Iraq was so awash in CEA that coalition forces were overwhelmed with trying to secure ammunition sites. Several of the storage depots were miles long and contained hundreds of storage magazines. In most instances, coalition forces bypassed ammunition sites without trying to establish even a minimum cursory security

element. Looting became rampant because ammunition sites were inadequately guarded. David Kay, the former chief US weapons inspector said that looting was so bad during the fall of 2003 that Iraqis were going in at night individually and in trucks. "There were just not enough boots on the ground, and the military didn't give it a high enough priority to stop the looting. Tens of thousands of tons of ammunition were being looted, and that is what is fueling the insurgency."<sup>7</sup> The Defense Intelligence Agency (DIA) confirmed Kay's account and in a 9 November 2003 DIA report, noted the vast majority of explosives and ordnance used in anti-coalition improvised explosive devices have come from pilfered Iraqi ammunition stockpiles and prewar established caches."<sup>8</sup> As late as December 2003, approximately 250,000 short tons (ST) or 39% of the estimated total of 600,000 ST of Iraqi CEA were only partially secured.

### **IMPROVISED EXPLOSIVE DEVICES**

The ammunition strewn all over Iraq provides insurgents with easily accessible materiel to make improvised explosive devices (IEDs) used to kill coalition forces, Iraqi security personnel and civilians in an attempt to discredit Iraq's new government and weaken the coalition and world support for it. Use of these devices was rare until the summer of 2003. Before IEDs became the weapon of choice, coalition forces were predominately attacked with small arms and RPGs, items commonly found in ammunition caches. RPG-7s were the leading casualty producer, responsible for 50 percent of U.S soldiers killed in post-war operations until use of IEDs significantly increased in 2004.<sup>9</sup> "IEDs continue to be the greatest casualty producer among our troops in the field," General Abizaid said during a 3 March 2004 House Armed Services Committee hearing.<sup>10</sup> Six months later with the IED problem continually growing, General Richard Cody, Army Vice Chief of Staff, stated in an interview in September 2004 that 500 to 600 IEDs go off every month and are now responsible for about 90 percent of killed and wounded.<sup>11</sup> The Army has what General Cody described as a "Manhattan-like project" trying to solve the IED problem by developing Tactics, Techniques and Procedures (TTPs) to combat the IED threat. The Army led the Defense Department's effort by standing up the IED Task Force, with the goal of transitioning the Task Force into a permanent organization, the Joint IED Defeat Task Force that would focus all counter IED efforts within DoD.

An argument could be made that no one could have predicted that IEDs would become the insurgency's weapon of choice. However, students of Middle East conflicts, especially the Israeli-Palestinian conflict, could tell you that IEDs are the preferred method of attack used by anti-Israeli terrorist.

In the past, Shi'ite Arabs in other countries have shown themselves to be particularly dangerous when they turned to terrorism, due to the special religious

sanction given to the concept of martyrdom in Shi'ite Islam. Shi'ites in Lebanon developed and perfected the technique of suicide car bombing which they applied to Israeli occupation forces during the 1980s and 1990s with considerable effect. This tactic is now popular in the Palestinian territories, but was utilized only after careful attention to the Lebanese Shi'ite example.<sup>12</sup>

With the amount of media coverage of the effectiveness of IEDs in the Israeli-Palestinian conflict, any future Iraqi insurgency would surely have looked at IEDs, and especially suicide car bombs as a viable tactic in their fight. The employment of IEDs by the Taliban and al Qaeda in Afghanistan, albeit at a much reduced level than what is currently being seen in Iraq, also provided a harbinger for IED usage in Iraq.

Some would also argue that even if adequate forces had been available for securing ammunition depots, ASPs, and caches; the insurgency would still be employing IEDs against coalition forces. "Captured documents indicate that there were approximately 500 official and unofficial border crossing points between Iraq, Jordan, Saudi Arabia, Kuwait, and Iran."<sup>13</sup> Even now two years into the war there is strong evidence that non-Iraqi foreign insurgents are coming into Iraq through borders that are not completely sealed. It stands to reason that these foreign insurgents would be smuggling the weaponry, ammunition, and explosives needed to continue the fight if they were not available in Iraq. This argument however is untenable when you compare it to the magnitude of just not the daily numbers of IEDs but also the large amount of explosives used in the construction of the IEDs. The typical IED in Iraq incorporates one or more artillery or mortar rounds. A single 122 mm artillery round which are regularly incorporated into IEDs weigh approximately 100 lbs. Often, artillery rounds are daisy-chained together and spaced over 100 meters distances along roads ensuring upon detonation that at least some vehicles are hit no matter the tactical spacing and speed of the vehicles. IEDs are built so powerful as to easily destroy Bradley infantry fighting vehicles and blow turrets off M-1 tanks. Car or truck bombs or what the military calls Vehicle Borne Improvised Explosive Devices (VBIEDs) usually incorporate dozens of artillery rounds, or aircraft bombs each weighing hundreds of pounds. Between September and December 2004 there were a total of 247 VBIEDs that were used against coalition forces in Iraq. In December 2004, insurgents lured police into a house in Baghdad and then set off an explosion that killed at least 28 Iraqi police and civilians. The US military estimated that the intensity of the damage came from 1,700 to 1,800 pounds of explosives.<sup>14</sup> It is doubtful the insurgency could sustain this bombing operational tempo and high explosive weight IED construction if abundant ammunition was not already available within Iraq. Most probably, IED attacks would still be occurring even with early securing of CEA, but most assuredly at a much-reduced tempo and lethal construction.

On 19 August 2003, a truck bomb exploded at the United Nations' headquarters in Baghdad. The attack killed Sergio Vieira de Mello, the United Nations Special Representative in Iraq and United Nations High Commissioner for Human Rights. The blast additionally killed 22 civilians of the United Nations staff and nongovernmental organizations (NGOs). After the attack 120 NGOs pulled at least some of their staff out of Iraq and the International Committee of the Red Cross (ICRC) cut its staff by two-thirds. Oil pipelines and reconstruction projects have been consistently bombed, increasing costs and prolonging rehabilitation of critical infrastructure. Between April 2003 and September 2004, there were an estimated 123 IED attacks on Iraq's oil infrastructure.<sup>15</sup> In December of 2004, Contrack International Inc., a major US contractor pulled out of Iraq citing security cost concerns. On 10 January 2005 Ukraine, acting a day after an explosion killed eight of its soldiers in Iraq, announced that it would withdraw its 1,650 soldiers by the middle of 2005. During the 30 January 2005 Iraqi election, 44 people died mainly from terrorist bombing on voters and polling places. Voter turnout was better than many people expected but no one would disagree that more Iraqis would have voted had security not been a concern.

### **CEA'S IMPACT ON RESOURCES**

Coalition leadership realized that CEA posed a significant problem in several aspects. They realized early on that CEA was being pilfered and used against coalition forces. They also recognized that ammunition with its inherent explosive hazards posed an "environmental" force protection threat to the general safety of their soldiers and especially to the Iraqi populace.

The CEA collection effort began shortly after the fall of Baghdad. Initial focus was on caches encountered by units as they maneuvered, which the units and their supporting Explosive Ordnance Disposal (EOD) teams were "blowing in place" as they were encountered. Military leadership soon began to realize that securing and disposal of CEA was going to be a significant resource intensive long-term mission. As major combat operations ended and units transitioned to Stability and Support Operations (SASO), the Army's V Corps which later transitioned to Combined Joint Task Force -7 (CJTF-7) began developing plans using units in theater to meet the demands of collecting, securing, and disposing of CEA in a more concerted and organized manner. In July 2003, CJTF-7 stood-up Task Force (TF) Bullet. In view that during Phase IV the probability of employing artillery fires would be very low, CJTF-7 tasked V Corps' 17th and 41st Artillery Brigades to TF Bullet to begin the CEA clean up. On 13 July 2003 CJTF-7 stood-up the CEA Branch consisting of one Ordnance colonel and a staff of eight under BG Davis, the CJTF-7 C-7. This was a result of the Combined Forces Land Component

Commander's (CFLCC) ammunition staff's recommendation after they observed throughout Iraq inconsistencies in safety and procedures during CEA collection and disposal operations. The initial mission of the CEA Branch was to develop policy and procedures for the safe and efficient collection, storage, demilitarization and ammunition issue to the New Iraqi Army (NIA) and to conduct site assessments to determine the best sites for the operations throughout the Iraqi Zone of Operations.<sup>16</sup>

As emphasis was placed on the CEA mission, CJTF-7 dedicated substantial resources to securing and disposing of the ammunition. The 4th Infantry Division, 82nd Airborne Division, and 3rd Armored Cavalry Regiment all committed 100% of their artillery brigades to the mission. The 101st Air Assault Division tasked a slice of their Air Defense Artillery, and the 3<sup>rd</sup> Corps Support Command (COSCOM) assigned several of their logistical units to the mission. Almost all engineering units throughout Iraq were also substantially engaged in CEA operations.<sup>17</sup>

The CEA Branch was additionally tasked to secure funding for contractor operations and began the initial steps for transitioning the CEA mission from a predominantly military operation to a civilian operation. The Engineering and Support Center in Huntsville, Alabama, part of the US Army Corps of Engineers (USCOE) was selected to begin contract negotiations with civilian EOD contractors and in July 2003 awarded contracts to four businesses, which began substantive operations in late fall of 2003.<sup>18</sup> The contractors were given a scope of work comprising four tasks that essentially were CJTF-7's end state for CEA within the Iraqi theater:

- Military munitions removed from caches and consolidated.
- Munitions and munitions storage areas are secured to avoid pilfering for profit or guerilla use.
- Unserviceable and excess ammunition destroyed.
- Munitions for the New Iraqi Army (NIA) stored and secured in appropriate facilities

As of December 2004, contractors were operating at six sites employing 563 US personnel and over 1,470 Iraqis as laborers and security guards. Contractors had secured over 163,000 ST in depots and disposed of over 158,000 ST. The military still had responsibility for providing convoy security and for the identification and reporting of found CEA caches

During the initial months of the invasion, coalition units tried to dispose of caches as they encountered them. Operationally this made sense and was encouraged by unit leadership. However few units were trained in CEA demolition disposal operations. Demolition training for engineer units is focused on structural demolitions and obstacle breaching. Combat Arms units are also provided limited demolition training, again focused on demolition of structures and

obstacles. Only EOD units are specifically trained to render safe and dispose of foreign ammunition. Many caches destroyed by U.S military units ended up producing a bigger problem by scattering the contents with the munitions “kick-outs” having been subjected to an explosion, now possibly more unsafe.

Some engineer units thought that blowing bunkers full of ammunition by pouring diesel on the floor and setting it on fire, would cause ammo inside to detonate and fully destroy it. Using their tactics of “blow and go” they didn’t return until later to discover it didn’t work. All they had done was scatter munitions everywhere. We assisted in cleaning up some areas, removing much-needed EOD assets from the fight, but Engineers continue to do the same thing, and used EOD forces to clean up the mess.<sup>19</sup>

There was even an incident where a Cobra helicopter wanting to deny ammunition from falling into the hands of insurgents fired rockets into a bunker filled with ammunition. When the bunker exploded it fragged the helicopter forcing it to crash land. EOD units whose first priority was rendering safe IEDs and unexploded ordnance (UXO) could not keep up with the CEA workload. This caused combat arms units, especially the engineers to take on the task of collecting, securing, and sometimes destroying CEA caches.<sup>20</sup> The 3rd Infantry Division’s After Action Review (AAR) for OIF stated:

Though not specifically trained in UXO destruction procedures, combat engineers were critical to the removal and destruction of UXO and weapons caches. Units could not bypass the caches for fear of allowing enemy forces to back and police up the weapons to use against us. Nor could they afford to put guards on the caches until an EOD team could make it to the site. Although combat engineers supplementing and augmenting EOD was an essential expedient, this tactic presented considerable safety concerns. More than once, engineers trying to destroy weapons and ammunition ended up not using enough demolitions or placing it incorrectly.<sup>21</sup>

EOD units were in short supply because adequate numbers were not on the Time Phased Force Deployment List (TPFDL) to deploy early into the fight.

### **CEA’S IMPACT ON CIVIL MILITARY OPERATIONS**

One week after Baghdad fell into the hands of US troops, at least 14 civilians were killed and 10 wounded when an ammunition cache exploded in a southern suburb of the city. The US military accused unknown attackers of firing flares at the open dump in an attempt to turn the local populace against the coalition. The deadly blast triggered anti-American demonstrations because Baghdad residents blamed American troops for failing to remove the ammunition stocked so close to a populated neighborhood, even though the Iraqi Army placed it there. The explosion has been only one of many such incidents involving CEA located in populated areas.

Official statistics regarding the number of civilians killed or injured by mines, UXO, or CEA since the end of major combat operations are not available, however there are numerous indications that CEA has killed and injured large numbers of civilians. “*The New York Times* on 1 May 2003 quoted doctors in Mosul, Iraq as saying they were treating three to five children a day wounded by abandoned munitions.” During the same period, medical sources in Kirkuk, Kifri, and Jalawlah, reported more than 150 casualties, mostly children, were injured by munitions since the war in northern Iraq ended. In most conflict-ridden areas across the world, children are the most vulnerable to being injured by land mines, UXO, and CEA and Iraq is no exception.<sup>22</sup> Iraqis needing to put food on the table did significant looting of CEA. In a country where telephone poles are stripped of wires so people can sell the copper, many are willing to risk the danger of pilfering brass casings from artillery rounds. Others remove propellant for cooking or dump munitions on the ground to use the wooden crates for firewood. It is not rare for EOD contractors performing CEA operations to see blood and bits of body-parts among the ammunition. Hopefully they are the remains of an insurgent, but it is more probable that they belong to a hapless civilian or child. The US Army has a strong interest in preventing unintentional civilian casualties from UXO, and other explosive hazards from CEA. It directly supports US objectives in Iraq by helping to win “the hearts and minds” of the Iraqi people. Additionally as an occupying power, the US has the duty to protect the Iraqi people. Article 43 of the Regulations Respecting the Laws and Customs of War on Land, annexed to Hague Convention (II) of 1899 and (IV) of 1907, states that Occupying Powers have the obligation “to restore and ensure, as far as possible, public order and life in the occupied territory.”<sup>23</sup> With respect to CEA, it means securing or disposing of it in an expeditious manner. The US has repeatedly stressed its commitment to avoiding civilian casualties. Policing the battlefield of CEA and UXO as quickly as possible would demonstrate that commitment in a vivid and meaningful way.

Force protection of our own forces is also a primary reason to quickly rid the battlefield of explosive hazards. UXOs and CEA accidents have killed 26 and injured over 70 coalition military personnel since the beginning of the war.

## **INTELLIGENCE AND PHASE IV PLANNING**

### **INTELLIGENCE**

Planning for OIF did not adequately take into consideration the vast amounts of CEA and its subsequent use by insurgents to fashion IEDs from it, or the logistical efforts that would be required in collecting, securing, and disposing of CEA. Did US military planners know how

much ammunition was in Iraq before they invaded? In hindsight the answer is yes. The exact quantity could not be precisely ascertained but a rough estimation could have been made. In April 1991, after Operation Desert Storm, the United Nations Special Commission (UNSCOM) and later in 1999, the United Nations Monitoring and Verification Inspection Commission (UNMOVIC) were created through United Nations Security Council mandates to operate a monitoring and verification system to ensure Iraq dismantled its WMD programs and was prevented in clandestinely developing WMD. To verify Iraq's WMD program, UNMOVIC alone conducted over 400 inspections covering more than 300 sites many of which were ammunition storage sites.<sup>24</sup> UNSCOM and UNMOVIC inspections did not receive full Iraqi cooperation but inspectors were generally given access to facilities, especially if they were not overly pertinent to Iraq's WMD program, such as conventional ammunition storage sites. The United Nations and the US therefore knew approximately how large Iraq's conventional ammunition stockpile was. However, the focus of the inspections was on WMD, not conventional ammunitions stockpiles. Months before the invasion by coalition forces, a large-scale effort was in progress to find information concerning Iraq's WMD. The 75th Exploitation Task Force, and later the Iraq Survey Group were the principle component of the US' plan to find and document Iraq's WMD programs. In preparation for these groups to begin searching for WMD after the invasion, US intelligence agencies identified roughly 600 potential weapons related facilities.<sup>25</sup> This list included the locations of Iraq's major ammunition depots and ASPs. Satellite imagery clearly showed the number and size of the storage magazines at each location. For the most part Iraqi ammunition storage areas are laid-out much like ammunition storage sites in the US. From this information a rough estimate could have been developed concerning Iraq's ammunition stockpile. Knowing the exact amount, type, and condition of the ammunition in the magazines was difficult, but that level of detail was unnecessary for pre-war planning of possible courses of action for the security and destruction of CEA. One of USCENTCOM's Priority Intelligence Requirements (PIRs) before and during Operation Iraqi Freedom was the location of ammunition depots and ASPs. The PIR was primarily focused on locating WMD but it still provided an approximation of Iraq's ammunition storage infrastructure. Again, USCENTCOM and the intelligence community were focused on WMD threats and documenting Saddam Hussein's WMD programs, not on tactical and operational considerations of CEA.

#### PHASE IV PLANNING

A war tactically and operationally "won" can still lead to strategic "loss" if post-conflict operations are poorly planned or executed. Within academia and the media there have been

prodigious writings with broad agreement, of how the US military performed superbly during the initial invasion and defeat of the Iraqi military, but incompetently planned for the occupational phase of the operation. The root causes of inadequate Phase IV planning will not be analyzed in this paper, but suffice it to say, “many basic tasks that should have been seen as necessary in Iraq – policing the streets, guarding huge weapons depots, protecting key infrastructure, maintaining public order – were simply not planned for.”<sup>26</sup> In fairness, the Bush administration and the US military could not predict with certainty the conditions that developed after the capture of Baghdad. However some of the more in-depth scholarly works that focused on post-conflict Iraq, such as the study published by the US Army War College in February 2003 did emphasize the importance of providing security and disarming the Iraqi populace immediately following major combat operations. “There are, however, several powerful counterarguments to the claim that post-Saddam Iraq was destined to be chaotic. First porous borders and large unprotected weapons caches were to a large extent preventable. A more complete “Phase IV” operational blueprint would have done much to secure them through better planning and, quite probably, more troops.”<sup>27</sup>

## **RECOMMENDATIONS/CONCLUSION**

### **BETTER PHASE IV PLANNING STARTS WITH BETTER INTELLIGENCE.**

CEA should be a factor in the Joint Intelligence Preparation of the Battle-space (JIPB). More specifically, CEA should be a factor in the Army or Land Component’s Intelligence Preparation of the Battle-space (IPB). “Joint forces will conduct JIPB to evaluate the battle-space environment and adversary in a wide variety of situations across the full range of military operations. Whereas JIPB focuses on the adversary’s known or postulated national and operational level multi-force component or “joint” strategy, IPB concentrates on the capabilities and vulnerabilities of the adversary’s individual force components of interests to the component commands.”<sup>28</sup> When the land component’s IPB estimates that the adversary has significantly large stocks of ammunition dispersed within hundreds of locations that could potentially be used to fuel an insurgency, similar to the conditions during OIF, that information should be incorporated into the JIPB analysis. Even though the JIPB’s main focus is on providing predictive intelligence designed to help the Joint Force Commander discern the adversary’s probable intent and most likely future course of action, it does significantly influence the type, amount and timing of military forces to be deployed. If CEA is factored into the JIPB for future OIF like conditions, the TPFDL should include more EOD forces deployed sooner along with engineer and logistical assets specifically identified to the CEA mission.

## EOD STAFF OFFICERS ON PLANNING STAFFS

The amount and sophistication of IEDs along with the abundance of CEA encountered during OIF has been unprecedented in the history of warfare and therefore military planners and intelligence analyst simply did not sufficiently consider it as a factor in pre-war planning. Geographical Combatant Commanders should have an EOD field grade officer on their planning staffs to assist in identifying EOD and CEA related issues and for planning the execution of EOD related requirements. Before operations in Afghanistan and Iraq, the general US military population did not think about CEA and IEDs and did not fully understand the usefulness and capabilities of Explosive Ordnance Disposal personnel in either conducting operations or in planning for them. Currently within the Army there is no EOD representation at any maneuver headquarters at the major command (MACOM) level. The 52D Ordnance Group (Explosive Ordnance Disposal) that was in charge of all Army EOD forces in OIF did anticipate the IED threat to a limited degree but did not fully anticipate the extent of the enormous CEA problem mainly due to a lack of pre-war intelligence concerning CEA in Iraq.

## USE ANY AVAILABLE RESOURCES TO SECURE CEA

The first priority for dealing with CEA should have been securing the depots, ASPs and caches. Insurgents would have been denied war materiel, children prevented from playing with it, civilians kept from "economic pilfering," and coalition forces would have been provided increased force protection. But securing the vast amount of CEA would have required more forces than were available. Most agree that one of the most significant mistakes made following the war was disbanding the 400,000 man Iraqi Army by Ambassador Paul Bremer on 15 May 2003 as part of the effort to purge Baath Party influence from Iraqi society.<sup>29</sup> This action exacerbated unemployment and created an instant source of recruits for the insurgency and took away a large pool of manpower that could have been put towards the task of policing CEA. With the US military's limited force structure, "host nation" military personnel must be used if possible for security related tasks particularly in countries where there has been a regime change.

## PLAN FOR USING EOD CIVILIAN CONTRACTORS

Integration of civilian EOD contractors into CEA operations should be a consideration when planning Phase IV operations. Years of experience have shown that if used properly, contractors can provide a viable service on the battlefield. The Army Corps of Engineers' management of civilian EOD contractors and the performance of those contractors during OIF have been very successful. EOD contractor personnel do not possess the full capabilities of

military EOD personnel due to a lack of some specialized tools, equipment, and current training; however they are capable of handling and disposing of CEA and UXO within specific parameters as they are doing in Iraq. With military EOD being a high demand, low-density asset; civilian contractors should be considered a viable option in the planning and execution of CEA operations. Early integration of contractors can significantly reduce the burden on military assets and can eventually be used to transition the CEA mission from a military operation to a predominately civilian operation.

Many military planners would consider CEA to be a tactical or at most an operational problem, but under the circumstances and extent that CEA was encountered during Operation Iraqi Freedom, CEA can have implications that effect the obtainment of strategic goals. One of the primary lessons learned from Operation Iraqi Freedom is that the US needs to put more emphasis on postwar security strategy and be better prepared for the complex tasks of security and nation building. Experience in Operation Iraqi Freedom has shown that intelligence is key to identifying and planning for potential CEA and IED operations. Without intelligence notifying the coalition of the potential problems of having 650,000 tons of CEA scattered across Iraq, there was little planning before the war. This lack of information flow and predictive analysis left the coalition inadequately prepared to deal with CEA issues and delayed appropriate responses to the IED threat. IEDs are killing more coalition forces then any other means, as well as threatening almost every objective the US wants to achieve in Iraq, from maintaining the coalition, humanitarian relief, reconstruction, and democratization. Adequately securing CEA immediately after major combat operations would have significantly reduced the IED threat in Operation Iraqi Freedom. Prewar identification of CEA as a possible factor influencing security and significantly impacting resources needs to be part of Phase IV planning for any future large-scale operation.

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## ENDNOTES

<sup>1</sup> Bradley Graham and Thomas E. Ricks, "Munitions Issue Dwarfs the Big Picture," *Washington Post Online*, 29 October 2004 [journal on-line]; available from <<http://ebirds.afis.osd.mil/ebfiles/e20041029332995.html>>; Internet; accessed 29 October 2004.

<sup>2</sup> Ibid.

<sup>3</sup> Warren Richey, "Iraq's Other Disarmament Challenge: Small Arms," *The Christian Science Monitor Online* 2 May 2003 [journal on-line]; available from <<http://www.csmonitor.com/2003/0502/p03s01-woiq.htm>>; Internet; accessed 20 December 2004.

<sup>4</sup> Ibid.

<sup>5</sup> "Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD" (Iraq Survey Group Final Report, 30 September 2004), 3 vol; available from <[http://global.security.org/wmd/library/report/2004/isg-final-report/isg-final-report\\_vol\\_3cw-anx-h.htm](http://global.security.org/wmd/library/report/2004/isg-final-report/isg-final-report_vol_3cw-anx-h.htm)>; Internet; accessed 6 January 2005.

<sup>6</sup> Joseph Biden, "U.S. Senator Joseph Biden (D-DE) Holds a News Teleconference on the Missing Explosives in Iraq," *FDCH Political Transcripts*, 27 October 2004, (3754 words) [database on-line]; available from Lexis-Nexis; accessed 21 December 2004.

<sup>7</sup> Kit R. Roane and Edward T. Pound, "A Mess of Missing Ordnance," *U.S. News and World Report* (8 November 2004): 32.

<sup>8</sup> Ibid.

<sup>9</sup> George J. Mordicall, "Phase Four Operations in Iraq and the RPG-7," *News from the Front Online* November – December 2003 [journal on-line]; available from <[http://www.d-n-i-.net/fcs/iraq\\_and\\_the\\_RPG-7.htm](http://www.d-n-i-.net/fcs/iraq_and_the_RPG-7.htm)>; Internet; accessed 6 January 2005.

<sup>10</sup> Lisa Burgess, "DOD Explores All Options to Counter IED Attacks," *Stars and Stripes Online*, 17 December 2004 [journal on-line]; Internet; available from <<http://www.stripesonline.com/article.asp?section=104&article+20991&archive=true>>; accessed 17 December 2004.

<sup>11</sup> Ann Roosevelt, "Taking on IED's A 'Manhattan-Like' Project, Top General Says," *Defense Daily Online* 14 September 2004 [journal on-line]; available from <<http://ebird.afis.osd.mil/ebfiles/e20040914320274.html>>; Internet; accessed 21 September 2004.

<sup>12</sup> Conrad C. Crane and W. Andrew Terrill, "Reconstructing Iraq: Insights, Challenges, and Missions for Military Forces in a Post-Conflict Scenario," (Carlisle Barracks: U.S. Army War College, February 2003), 26-41.

<sup>13</sup> Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD (Iraq Survey Group Final Report 30 September 2004), vol. 1.

- <sup>14</sup> Jackie Spinner, "House Is Blown Up as Police Move In," *Washington Post Online*, 30 December 2004 [journal on-line]; available from <<http://ebird.afis.osd.mil/ebfiles/e20041230343540.html>>; Internet; accessed 4 January 2005.
- <sup>15</sup> "Iraq," *Country Analysis Briefs Online* November 2004 [journal on-line]; available from <<http://www.eia.doe.gov/emeu/cabs/iraq.html>>; Internet; accessed 16 February 2005.
- <sup>16</sup> "CEA Reporting Conference," briefing slides with scripted commentary, Combined Joint Task Force-7, 27 July 2003.
- <sup>17</sup> Paul Plemmons <[paul.plemmons@us.army.mil](mailto:paul.plemmons@us.army.mil)>, "Task Force Bullet AAR," electronic mail message to Mark Klingelhofer [Mark.Klingelhofer@carlisle.army.mil](mailto:Mark.Klingelhofer@carlisle.army.mil), 3 January 2005.
- <sup>18</sup> Betsy Weiner, "Captured Enemy Ammunition," *Soldiers* (June 2004): 27-29.
- <sup>19</sup> Dick A. Larry, "EOD Perspectives," *Ordnance Magazine* (Fall 2004): 18.
- <sup>20</sup> Center for Army Lessons Learned, *Operation Iraqi Freedom (OIF) CAAT II Initial Impressions Report (IIR)*, 24 June 2003; available from <[http://www.globalsecurity.org/military/library/report/call/call\\_04-13\\_chap03-c.htm](http://www.globalsecurity.org/military/library/report/call/call_04-13_chap03-c.htm)>; Internet; accessed 8 November 2004.
- <sup>21</sup> *Ibid.*, 15.
- <sup>22</sup> Jean-Christophe Peuch, "Unexploded Ordnance, Unfired Munitions Kill, Injure Children," *MAG Online*, 20 May 2003; available from <<http://www.magclearsmine.org/magtest/media/200503rfel.htm>>; Internet; accessed 20 December 2004.
- <sup>23</sup> Charles I. Bevans, "The Avalon Project-Laws of War: Laws and Customs of War on Land," 29 July 1899; available from <<http://www.yale.edu/lawweb/avalon/lawofwar/hague02.htm>>; Internet; accessed 12 January 2005.
- <sup>24</sup> Hans Blix, "United Nations Monitoring and Verification Commission," Blix briefing on Inspections in Iraq, 14 February 2003; available from <<http://www.iraqwatch.org/un/unmovie/unmovie-blix-briefing-021413.html>>; Internet; accessed 16 January 2005.
- <sup>25</sup> Barton Gellman, "Frustrated, U.S. Arms Team to Leave Iraq," *Washington Post Online*, 11 May 2003 [journal on-line]; available from <<http://ebird.dtic.mil/May2003/e20030512184338.html>>; Internet; accessed 15 May 2003.
- <sup>26</sup> Michael E. O'Hanlon, "Iraq Without a Plan," *Policy Review* 128 (December and January 2005): 38.
- <sup>27</sup> *Ibid.*, 39.
- <sup>28</sup> Joint Chiefs of Staff, *Doctrine for Intelligence Support to Joint Operations*, Joint Pub 2-0 (Washington, D.C.: U.S. Joint Chiefs of Staff, 9 March 2000), I-7.
- <sup>29</sup> George Fella, *Security Strategy for Postwar Iraq*, Strategy Research Project (Carlisle Barracks: U.S. Army War College, 19 March 2004), 5.

## GLOSSARY

- Cache: A temporary weapons and or ammunition storage area used for prepositioning ammunition for combat operations or as a hiding place used by insurgents/terrorist for ammunition and weapons. CJTF-7 never formally defined the parameter of a cache. In Operation Iraqi Freedom, a cache could be a few rounds of ammunition or it could be thousands of weapons and ammunition in a permanently built ammunition storage area. This resulted in confusion in reporting, establishing priorities of effort, and assigning responsibility for operations.
- CEA: (Captured Enemy Ammunition) Enemy ammunition that has not been used during a conflict and has been captured left behind unprotected or dumped by a party to an armed conflict. CEA is usually standard military ammunition that is in a safe, unfired condition. CEA may or may not have been primed, fuzed, or otherwise prepared for use.
- IED: (Improvised Explosive Device) A nonstandard explosive device fabricated from common materials, designed to kill, destroy or harass. It may incorporate standard or nonstandard explosives, captured enemy ammunition (CEA), or pyrotechnic chemicals. IEDs vary in size, shape, material and construction. IEDs can range from simple mechanical devices to complex electronic and radio controlled (R/C) command detonated devices. IED construction is limited only by the materials available and the bomber's skill and imagination.
- Partially Secured: Defined by CJTF-7 as it pertained to security measures applied to ammunition and weapon caches and standard storage areas. A cache or storage area that was partially secured had periodic patrols or surveillance or was fenced or bermed.
- UXO: (Unexploded Ordnance) Standard military explosive ammunition which has been fuzed, dropped, launched, projected, fired, thrown or placed, but remains unexploded because of malfunction. Essentially ammunition that has been used in a weapon system but failed to function as designed. Usually synonymous with "dud."



## BIBLIOGRAPHY

- Bevans, Charles I. "The Avalon Project - Laws of War: Laws and Customs of War on Land." 29 July 1899. Available from <<http://www.yale.edu/lawweb/avalon/lawofwar/hague02.htm>>. Internet. Accessed 12 January 2005.
- Biden, Joseph. "U.S. Senator Joseph Biden (D-DE) Holds a News Teleconference on the Missing Explosives in Iraq." *FDCH Political Transcripts*, 27 October 2004, (3754 words). Database on-line. Available from Lexis-Nexis. Accessed 21 December 2004.
- Blix, Hans. "United Nations Monitoring and Verification Commission." Blix Briefing on Inspections in Iraq, 14 February 2003. Available from <<http://www.iraqwatch.org/un/unmovie/unmovie-blix-briefing-021403.html>>. Internet. Accessed 16 January 2005.
- Burgess, Lisa. "DOD Explores All Options to Counter IED Attacks." *Stars and Stripes Online*, 17 December 2004. Journal on-line. Available from <<http://www.stripesonline.com/article.asp?section=104&article=20991&archive=true>>. Internet. Accessed 17 December 2004
- "CEA Reporting Conference." Briefing slides with scripted commentary. Combined Joint Task Force-7, 27 July 2003.
- Center for Army Lessons Learned. *Operation Iraqi Freedom (OIF) CAAT II Initial Impressions Report (IIR)* 24 June 2003. Available from <[http://www.globalsecurity.org/military/library/report/call/call\\_04-13\\_chap03-c.htm](http://www.globalsecurity.org/military/library/report/call/call_04-13_chap03-c.htm)>. Internet. Accessed 8 November 2004.
- Comprehensive Report of the Special Advisor to the DCI on Iraq's WMD. Iraq Survey group Final Report, 30 September 2004. Available from <[http://globalsecurity.org/wmd/library/report/2004/isg-final-report/isg-fianlreport\\_vol3\\_cw-anx-h.htm](http://globalsecurity.org/wmd/library/report/2004/isg-final-report/isg-fianlreport_vol3_cw-anx-h.htm)>. Internet; accessed 6 January 2005.
- Crane, Conrad C., and W. Andrew Terrill. *Reconstructing Iraq: Insights, Challenges, and Missions for Military Forces in a Post-Conflict Scenario*, " (Carlisle Barracks PA: U.S. Army War College, February 2003), 26.1 – 26.121.
- Fella, George. *Security Strategy for Postwar Iraq*. Strategy Research Project. Carlisle Barracks: U.S. Army War College, 19 March 2004.
- Gellman, Barton. "Frustrated, U.S. Arms Team to Leave Iraq." *Washington Post Online*, 11 May 2003. Journal on-line. Available from <<http://ebird.dtic.mil/May2003/e20030512184338.html>>. Internet. Accessed 15 May 2003.
- Graham, Bradley, and Thomas E. Ricks. "Munitions Issue Dwarfs the Big Picture." *Washington Post Online*, 29 October 2004. Journal on-line. Available from <<http://ebirds.afis.osd.mil/ebfiles/e20041029332995html>>. Internet. Accessed 29 October 2004.
- "Iraq." *Country Analysis Briefs Online* November 2004. Journal on-line. Available from <<http://www.eia.doc.gov/emeu/cabs/iraq.html>>. Internet. Accessed 16 February 2005.
- Larry, Dick A. "EOD Perspectives." *Ordnance Magazine* (Fall 2004): 17-20.

- Mordica, George II. "Phase Four Operations in Iraq and the RPG-7." *News from the Front Online* November-December 2003. Journal on-line. Available from <[http://www.d-n-i.net/fcs/iraq\\_and\\_the\\_RPG-7.htm](http://www.d-n-i.net/fcs/iraq_and_the_RPG-7.htm)>. Internet. Accessed 6 January 2005.
- O'Hanlon, Michael E. "Iraq Without a Plan." *Policy Review* 128 (December and January 2005): 33-43.
- Peuch, Jean-Christophe. "Unexploded Ordnance, Unfired Munitions Kill, Injure Children." *MAG Online* 20 May 2003. Available from <<http://www.magclearsmine.org/magtest/media/200503rfel.htm>>. Internet. Accessed 20 December 2004.
- Plemmons, Paul <[paul.plemmons@us.army.mil](mailto:paul.plemmons@us.army.mil)>. "Task Force Bullet AAR." Electronic mail message to Mark Klingelhoef Mark.Klingelhoef@carlisle.army.mil. 3 January 2005.
- Richey, Warren. "Iraq's Other Disarmament Challenge: Small Arms." *The Christian Science Monitor* 02 May 2003. Journal on-line. Available from <<http://www.csmonitor.com/2003/0502/p03s01-woiq.htm>>. Internet. Accessed 20 December 2004.
- Roan, Kit R, and Edward T. Pound. "A Mess of Ordnance." *U.S. News and World Report* (8 November 2004): 32-38.
- Roosevelt, Ann. "Taking on IED's A 'Manhattan-Like' Project, Top General Says." *Defense Daily Online* 14 September 2004. Journal on-line. Available from <<http://ebird.afis.osd.mil/ebfiles/e20040914320274.html>>. Internet. Accessed 21 September 2004.
- Spinner, Jackie. "House Is Blown Up as Police Move In." *Washington Post Online*, 30 December 2004. Journal on-line. Available from <<http://ebird.afis.osd.mil/ebfiles/e20041230343540html>>. Internet. Accessed 4 January 2005.
- U.S. Joint Chiefs of Staff. *Doctrine for Intelligence Support to Joint Operations*. Joint Pub 2-0. Washington D.C.: U.S. Joint Chiefs of Staff, 9 March 2000.
- Weiner, Betsy. "Captured Enemy Ammunition." *Soldiers* (June 2004): 27-29.