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OPERATION IRAQI FREEDOM

DOD Should Apply Lessons Learned Concerning the Need for Security over Conventional Munitions Storage Sites to Future Operations Planning

GAO-07-444

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Highlights

Highlights of GAO-07-444, a report to congressional committees

Why GAO Did This Study

Following the invasion of Iraq in March 2003—known as Operation Iraqi Freedom (OIF)—concerns were raised about how the Department of Defense (DOD) secured Iraqi conventional munitions storage sites during and after major combat operations. Because of the broad interest in this issue, GAO conducted this work under the Comptroller General's authority to conduct evaluations. This report examines (1) the security provided by U.S. forces over Iraqi conventional munitions storage sites and (2) DOD actions to mitigate risks associated with an adversary's conventional munitions storage sites for future operations on the basis of OIF lessons learned. To address these objectives, GAO reviewed OIF war plans, joint doctrine and policy, and intelligence reports, and interviewed senior-level DOD officials.

What GAO Recommends

GAO recommends that the Secretary of Defense direct the Chairman of the Joint Chiefs of Staff to (1) conduct a theaterwide survey and risk assessment on unsecured conventional munitions in Iraq, (2) report related risk mitigation strategies and results to Congress, and (3) incorporate conventional munitions storage site security as a strategic planning factor into all levels of planning policy and guidance. DOD partially concurred with our recommendations.
www.gao.gov/cgi-bin/getrpt?GAO-07-444.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Davi D'Agostino at (202) 512-5431or dagostinod@gao.gov.

What GAO Found

The overwhelming size and number of conventional munitions storage sites in Iraq, combined with certain prewar planning assumptions that proved to be invalid, resulted in U.S. forces not adequately securing these sites and widespread looting, according to field unit, lessons learned, and intelligence reports. Pre-OIF estimates of Iraq's conventional munitions varied significantly, with the higher estimate being five times greater than the lower estimate. Conventional munitions storage sites were looted after major combat operations and some remained vulnerable as of October 2006. According to lessons learned reports and senior-level DOD officials, the widespread looting occurred because DOD had insufficient troop levels to secure conventional munitions storage sites due to several OIF planning priorities and assumptions. DOD's OIF planning priorities included quickly taking Baghdad on a surprise basis rather than using an overwhelming force. The plan also assumed that the regular Iraqi army units would "capitulate and provide internal security." GAO analysis showed that the war plan did not document risk mitigation strategies—such as branch plans as recommended by joint planning doctrine—in case assumptions were proven wrong. Not securing these conventional munitions storage sites has been costly, as government reports indicated that looted munitions are being used to make Improvised Explosive Devices (IED) that have killed or maimed many people, and will likely continue to support terrorist attacks in the region. As of October 2006, the Multi-National Coalition-Iraq stated that some remote sites have not been revisited to verify if they pose any residual risk nor have they been physically secured. However, DOD does not appear to have conducted a theaterwide survey and assessment of the current risk unsecured conventional munitions represent to U.S. forces and others.

DOD has taken many actions in response to OIF lessons learned, such as setting up the Joint IED Defeat Organization to develop a more strategic approach to countering IEDs, which typically are made using looted munitions. However, our review of DOD doctrine, policy, guidance, and procedures used to guide operational planning and execution found little evidence of guidance on the security of conventional munitions storage sites. DOD's actions generally have emphasized countering the use of IEDs by resistance groups during post-hostility operations. GAO concludes that U.S. forces will face increased risk from this emerging asymmetric threat when an adversary uses unconventional means to counter U.S. military strengths. For example, one potential adversary is also estimated to have a significant amount of munitions that would require significant manpower to secure or destroy. GAO also concludes that this situation shows both that Iraqi stockpiles of munitions may not be an anomaly and that information on the amount and location of an adversary's munitions can represent a strategic planning consideration for future operations. However, without joint guidance, DOD cannot ensure that OIF lessons learned about the security of an adversary's conventional munitions storage sites will be integrated into future operations planning and execution.

Contents

Abbreviations

CENTCOM	U.S. Central Command
CJCS	Chairman of the Joint Chiefs of Staff
CRS	Congressional Research Service
DOD	Department of Defense
EOD	Explosive ordnance disposal
IED	Improvised explosive device
JIEDDO	Joint IED Defeat Organization
JOPES	Joint Operation Planning and Execution System
MNC-I	Multi-National Coalition-Iraq
MNF-I	Multinational Forces in Iraq
OIF	Operation Iraqi Freedom
TTP	Tactics, techniques, and procedures
WMD	Weapons of mass destruction

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Congressional Committees

In March 2003, citing the failure of Iraq to cooperate with weapons inspectors and other concerns, the United States and its coalition allies invaded Iraq in an operation known as Operation Iraqi Freedom (OIF). The commander of the U.S. Central Command (CENTCOM) was primarily responsible for developing and executing the war plan for OIF.[1] The strategic goals of this plan included (1) establishing a stable Iraqi nation and a broad-based government that renounces weapons of mass destruction (WMD), does not support terrorism, and is not a threat to its neighbors; and (2) leveraging success in Iraq to convince or compel other countries to cease support to terrorists and to deny them access to WMD. The plan's military priorities included overthrowing the Iraqi regime by rapidly capturing Baghdad and disarming Iraq of its WMD. Although WMD stockpiles were not found, Iraq had dispersed hundreds of thousands of tons of conventional munitions throughout the country at various storage sites.[2] During the rapid march to Baghdad, U.S. commanders were faced with the dilemma of bypassing conventional munitions storage sites or diverting troops from the war plan's top priorities to provide security at those sites. Baghdad was a top planning priority because the city represented a key concept, the "strategic center of gravity" for the regime. As the strategic center of gravity, if Baghdad were attacked and neutralized or destroyed, CENTCOM believed that the regime's control over the remaining military and security forces and the population would be severed.

The widespread looting of some Iraqi conventional munitions storage sites during OIF has been the subject of media reports. We previously reported on the looting and dispersal of radiological sources from a number of sites in Iraq after the invasion and the Department of Defense's (DOD) efforts to

[1]CENTCOM is one of five geographic combatant commands. A combatant command is a unified command established by the President of the United States with a broad continuing mission under a single commander.

[2]Conventional munitions are complete devices charged with explosives, propellants, pyrotechnics, or initiating composition that are not nuclear, biological, or chemical for use in military operations.

collect and secure those sources.[3] Because of the broad congressional interest in this issue, we conducted this work under the Comptroller General's authority to conduct evaluations on his own initiative. This report examines (1) the security provided by U.S. forces over conventional munitions storage sites in Iraq and (2) DOD actions to mitigate risks associated with an adversary's conventional munitions storage sites for future operations on the basis of OIF lessons learned. We are issuing this report to you because of your oversight responsibilities.

To examine the security over Iraqi conventional munitions storage sites provided by U.S. forces, we reviewed field unit reporting and intelligence products and interviewed DOD officials. We also collected and analyzed the various iterations of OIF plans, doctrine, and concepts of operations for coverage of the security of conventional munitions storage sites. To examine DOD's actions to learn from its experience with securing conventional munitions storage sites in Iraq and apply these lessons learned to mitigate risks during future operations, we interviewed DOD officials about their efforts to identify and document lessons learned and examined documents on operations in Iraq. We also developed a data collection instrument to use in analyzing draft and published joint doctrine; Chairman of the Joint Chiefs of Staff (CJCS) instructions and manuals; multiservice tactics, techniques, and procedures (TTP); and the joint improvised explosive device (IED) defeat handbook to determine to what extent those documents addressed the security of conventional munitions storage sites. We performed our work from November 2005 through October 2006 in accordance with generally accepted government auditing standards. A more detailed discussion of our scope and methodology can be found in appendix I.

This report is an unclassified version of a classified report dated December 14, 2006.[4] That report provided additional details on the estimated amounts of prewar Iraqi conventional munitions and the security over former Iraqi conventional munitions sites at the time of our review.

[3]GAO, *Radiological Sources in Iraq: DOD Should Evaluate Its Source Recovery Effort and Apply Lessons Learned to Further Recovery Missions*, GAO-05-672 (Washington, D.C.: Sept. 7, 2005).

[4] GAO, *Operation Iraqi Freedom: DOD Should Apply Lessons Learned Concerning the Need for Security over Conventional Munitions Storage Sites to Future Operations Planning*, GAO-07-71C (Washington, D.C.: Dec. 20, 2006).

Results in Brief

The overwhelming size and number of conventional munitions storage sites in Iraq, combined with prewar planning priorities and certain prewar planning assumptions that proved to be invalid, resulted in U.S. forces not adequately securing these sites and widespread looting, according to DOD sources. Pre-OIF estimates of Iraq's conventional munitions varied significantly, with the higher estimate being five times greater than the low estimate. Although the amount looted is unknown, field unit reports, numerous intelligence reports, and imagery products showed that many conventional munitions storage sites were looted after major combat operations and some may remain vulnerable. Moreover, in October 2006, we could not verify that all sites had been physically secured. However, DOD does not appear to have conducted a theaterwide survey and risk assessment regarding unsecured conventional munitions in Iraq, despite the strategic risk posed by IEDs made from those munitions. According to lessons learned reports and knowledgeable senior-level DOD officials, including field commanders, the widespread looting occurred during and immediately after major combat operations because DOD had insufficient troop levels to secure conventional munitions storage sites because of several OIF planning priorities and assumptions. DOD's OIF priorities, set forth in the February 2003 war plan, included taking Baghdad as quickly as possible on the basis of surprise and speed rather than using an overwhelming force, such as that used in 1991 during the first Gulf War. The OIF war plan also assumed that the regular Iraqi army units would "capitulate and provide internal security." Knowledgeable senior-level DOD officials stated that these Iraqi army units would have been used to secure conventional munitions storage sites. Our analysis of the various iterations of the war plan found that the OIF war plan did not document risk mitigation strategies—such as branch plans as recommended by joint planning doctrine—in case planning assumptions were proven wrong. According to a 2006 Joint Staff assessment developed as part of the lessons learned process, these priorities and assumptions resulted in a force structure plan that did not consider several missions requiring troops, including the security of conventional munitions storage sites.[5] Furthermore, the Multinational Forces in Iraq (MNF-I) stated that DOD did not have a centrally managed program for the disposition of enemy munitions until August 2003, after widespread looting had already occurred because, according to knowledgeable senior-level DOD officials, the OIF war plan's assumptions did not lead DOD to consider conventional munitions storage sites as a risk, as DOD planned to use the Iraqi army to

[5]U.S. Joint Forces Command, Joint Center for Operational Analysis, *Operation Iraqi Freedom May 2003 to June 2004: Stabilization, Security, Transition, and Reconstruction in a Counterinsurgency (Part Two)* (Norfolk, Va.: January 2006).

secure the country. However, not securing these conventional munitions storage sites has been costly. For example, looted munitions are being used to (1) construct IEDs that have killed or maimed many people and (2) maintain the level of violence against U.S. and coalition forces and their Iraqi partners, sustaining the conditions necessary to hamper reconstruction and economic stabilization efforts. Moreover, estimates indicate that the looted munitions will likely continue to support terrorist attacks throughout the region. Finally, DOD spent about $4.9 billion from fiscal years 2004 through 2006 on countering the IED campaign in Iraq and Afghanistan.

While DOD has taken many actions in response to OIF lessons learned, because of DOD's understandable focus on current operations, DOD has given little focus to mitigating the risk to U.S. forces posed by an adversary's conventional munitions storage sites for future operations planning. Instead, the department's actions in response to OIF lessons learned generally have emphasized countering the use of IEDs by an insurgency or terrorists during posthostility operations. For example, the Army and the Marine Corps have developed an interim handbook on IED defeat, and DOD has conducted a joint assessment of the explosive ordnance disposal (EOD) function to determine the sufficiency of EOD assets for future operations. Although these actions are good first steps, our review of DOD publications—such as doctrine, policy, guidance, and procedures issued by the CJCS—which are used to guide operational planning and execution found little evidence of guidance concerning the security of conventional munitions storage sites. We believe that U.S. forces will face increased risk from this emerging asymmetric threat when an adversary uses unconventional means to counter U.S. military strengths, or where the disintegration of a hostile regime is likely to lead to civil disorder, armed resistance, or civil war during a U.S. occupation. For example, one potential adversary is also estimated to have significant amounts of munitions; this would require an occupying force to dedicate significant manpower to secure or destroy the contents of conventional munitions storage sites. We also believe that this situation indicates both that Iraqi stockpiles of munitions may not be an anomaly and that information on the amount and location of an adversary's munitions can represent an important strategic planning and prioritizing consideration for future operations. However, without appropriate joint doctrine, policy, guidance, and procedures, DOD cannot ensure that OIF lessons learned regarding the security of an adversary's conventional munitions storage sites will be a strategic planning and priority-setting consideration that is integrated into future operations planning and execution, including development of appropriate force levels.

In this report, we are making three recommendations. We recommend that the Secretary of Defense direct the Chairman of the Joint Chief of Staff to (1) conduct a theaterwide survey and risk assessment regarding unsecured conventional munitions in Iraq; (2) report ensuing risk mitigation strategies and results to Congress; and (3) incorporate consideration of conventional munitions storage sites security into all levels of planning policy and guidance, including joint doctrine, instructions, manuals, and other directives.

In commenting on a draft of this report, DOD partially concurred with our recommendations. DOD's comments are reprinted in appendix III of this report.

Background

On March 17, 2003, citing the failure of Iraq to cooperate with weapons inspectors and other concerns, the United States and its coalition allies invaded Iraq. Three days later, on March 19, 2003, offensive operations began with air strikes against Iraqi leadership positions. By April 15, after 27 days of operations, coalition forces were in relative control of all major Iraqi cities and Iraqi political and military leadership had disintegrated. On May 1, 2003, President Bush declared an end to major combat operations.

When the invasion began and the Iraqi government no longer functioned, many areas experienced widespread looting and the breakdown of public services, such as electricity and water in the cities. U.S. and coalition forces were then confronted with the challenges of restoring public order and infrastructure even before combat operations ceased. Given the extensive looting, as we reported in 2005, DOD could not assume that facilities and items within the facilities would remain intact or in place for later collection without being secured.[6] Many facilities, such as abandoned government research facilities and industrial complexes, were no longer under the control of Iraqis and had been looted. For example, hundreds of tons of explosive materials that had been documented by the International Atomic Energy Agency prior to March 2003 at the Al Qa Qaa explosives and munitions facility in Iraq were lost after April 9, 2003, through the theft and looting of the government installations resulting from lack of security. We also reported that regarding radiological sources in Iraq, DOD was not ready to collect and secure radiological sources when the war began in

[6]GAO-05-672.

March 2003 and for about 6 months thereafter.[7] Until radiological sources could be collected, some sources were looted and scattered, and some troops were diverted from their regular combat duties to guard sources in diverse places.

U.S. and Coalition Forces Were Unable to Adequately Secure Conventional Munitions Storage Sites, Resulting in Widespread Looting

According to knowledgeable DOD officials, field unit reports, lessons learned reports, and intelligence information, U.S. and coalition forces were unable to adequately secure conventional munitions storage sites in Iraq, resulting in widespread looting of munitions. These DOD sources indicated that U.S. and coalition forces were overwhelmed by the number and size of these sites, and DOD had insufficient troop levels to secure conventional munitions storage sites because of prewar planning priorities and certain assumptions that proved to be invalid. Despite war plan and intelligence estimates of large quantities of munitions in Iraq, knowledgeable DOD officials reported that DOD did not plan for or set up a program to centrally manage and destroy enemy munitions until August 2003, well after the completion of major combat operations in May 2003. The costs of not securing these conventional munitions storage sites have been high, as explosives and ammunition from these sites used in the construction of IEDs that have killed and maimed people. Furthermore, estimates indicate such munitions are likely to continue to support terrorist attacks in the region.

U.S. Forces Were Overwhelmed by the Number and Size of Conventional Munitions Storage Sites, Leaving Those Sites Vulnerable to Looting

U.S. forces were overwhelmed by the number and size of conventional munitions storage sites in Iraq and they did not adequately secure these sites during and immediately after the conclusion of major combat operations, according to senior-level military officials, field unit reports, lessons learned reports, and intelligence information. Pre-OIF estimates of Iraq's conventional munitions varied significantly with the higher estimate being five times greater than the lower estimate. The commander of CENTCOM testified before the U.S. Senate Committee on Appropriations on September 24, 2003, that "there is more ammunition in Iraq than any place I've ever been in my life, and it is all not securable."[8]

[7]GAO-05-672.

[8]Fiscal Year 2004 Supplemental Request for Reconstruction of Iraq and Afghanistan: Hearings Before the Committee on Appropriations, United States Senate, 108th Cong. 133 (2003).

Furthermore, the sites remained vulnerable from April 2003 through the time of our review. For example, an assessment conducted from April 2003 through June 2003 indicated that most military garrisons associated with Iraq's former republican guard had been extensively looted and vandalized after the military campaign phase of OIF ended. It concluded that the most prized areas for looting were the depots or storage areas. The assessment further concluded that the thorough nature of the looting and the seemingly targeted concentration on storage areas suggested that much of the looting was conducted by organized elements that were likely aided or spearheaded by Iraqi military personnel.

Moreover, in early 2004, 401 Iraqi sites—including fixed garrisons, field sites, and ammunition production facilities—were reviewed to assess their vulnerability and the likelihood that anticoalition forces were obtaining munitions from those sites. Of the 401 sites, a small number of sites were considered highly vulnerable because of the large quantity of munitions, inadequate security, and a high level of looting. The majority of the sites were assessed as having low vulnerability—not because they had been secured, but because they had been abandoned or totally looted. The review considered virtually all the sites to be partially secured at best and concluded that U.S. and coalition troops were able to guard only a very small percentage of the sites.

Furthermore, since late 2004, insurgents and militia have continued to exploit former regime depots. Insurgents appear to have had continuing access to some sites over extended periods, even sites earmarked for demolition. For example, government information showed that insurgents, residents, and local officials looted weapons from a former regime military depot over a 6-month period despite a contract for local Iraqis to dispose of the facility's munitions. In addition, in April 2005, an Iraqi police officer found unsecured munitions at a former regime depot that the officer concluded had not been destroyed by coalition forces after they seized the depot in 2003. Moreover, in early 2006, local Iraqis stole rockets and mortars from an old storage area after rumors began to circulate that the site was to be cleaned up.

U.S. Forces Had Insufficient Troop Levels to Provide Adequate Security Because of OIF Planning Priorities and Assumptions

DOD senior-level officials and lessons learned reports stated that U.S. forces did not have sufficient troop levels to provide adequate security for conventional munitions storage sites in Iraq because of OIF planning priorities and certain assumptions that proved to be invalid. According to DOD officials, ground commanders had two top priorities during major combat operations that were set forth in the February 2003 OIF war plan. First, to overthrow the regime, DOD planned for and successfully executed a rapid march on Baghdad that relied on surprise and speed rather than massive troop buildup, such as was used in 1991 during the first Gulf War. This rapid march to Baghdad successfully resulted in the removal of the regime. Another critical planning priority was finding and securing the regime's stockpiles of WMD, which the administration believed were a threat to coalition forces and other countries in the region. The OIF war plan assumed that there was a high probability that the regime would use WMD against U.S. and coalition forces in a final effort to survive when those forces reached Baghdad. As a result, a CENTCOM planner for OIF stated that ground commanders had to prioritize limited available resources against the volume of tasks, both stated and implied, contained in the war plan.

Several critical planning assumptions upon which the February 2003 OIF war plan was based also contributed to the number of U.S. troops being insufficient for the mission of securing conventional munitions storage sites, including the following:

- **The Iraqi regular army would "capitulate and provide security."** The OIF war plan assumed that large numbers of Iraqi military and security forces would opt for unit capitulation over individual surrender or desertion. As stated in the OIF war plan, the U.S. Commander, CENTCOM, intended to preserve, as much as possible, the Iraqi military to maintain internal security and protect Iraq's borders during and after major combat operations. According to a study prepared by the Center for Army Lessons Learned, this assumption was central to the decision to limit the amount of combat power deployed to Iraq.[9] Several knowledgeable senior-level and command DOD officials and a joint lessons learned report pointed out that if this planning assumption had reflected actual conditions in Iraq, those Iraqi military units would have provided security over conventional munitions storage sites on their bases as well as other

[9]Office of the Chief of Staff, U.S. Army, *On Point: U.S. Army in Operation Iraqi Freedom* (Washington, D.C.: 2004).

Iraqi military infrastructure. Furthermore, the Coalition Provisional Authority, the civilian authority established by the administration to oversee the reconstruction of Iraq, dissolved the Iraqi Army on May 23, 2003—the same army that the CENTCOM commander assumed would provide internal security.

- **Iraqi resistance was unlikely**. Although the OIF war plan laid out the probability of several courses of action that the regime might take in response to an invasion, the plan did not consider the possibility of protracted, organized Iraqi resistance to U.S. and coalition forces after the conclusion of major combat operations. As a result, DOD officials stated that the regime's conventional munitions storage sites were not considered a significant risk.

- **Postwar Iraq would not be a U.S. military responsibility**. The OIF war planning, according to a Joint Forces Command lessons learned report, was based on the assumption that the bulk of the Iraqi government would remain in place after major combat operations and therefore civil functions, including rebuilding and humanitarian assistance, could be shifted from military forces to U.S. and international organizations and, ultimately, the Iraqis, within about 18 months after the end of major combat operations.[10] Therefore, DOD initially did not plan for an extended occupation of the country or the level of troops that would be needed to secure conventional munitions storage sites in particular or the country in general.

Joint assessments further showed that OIF planning assumptions contributed to security challenges in Iraq. According to a 2006 report by the Joint Center for Operational Analysis, OIF planning did not examine the consequences of those assumptions proving wrong, further contributing to insufficient force levels to prevent the breakdown of civil order in Iraq.[11] The Joint Staff strategic-level lessons learned report also discussed the effect inaccurate planning assumptions had on force levels. According to this report, overemphasis on planning assumptions that could not be validated prior to critical decision points resulted in a force

[10]U.S. Joint Forces Command, Joint Center for Operational Analysis, *Operation Iraqi Freedom May 2003 to June 2004: Stabilization, Security, Transition, and Reconstruction in a Counterinsurgency (Part One)* (Norfolk, Va.: January 2006).

[11]U.S. Joint Forces Command, Joint Center for Operational Analysis, *Operation Iraqi Freedom May 2003 to June 2004: Stabilization, Security, Transition, and Reconstruction in a Counterinsurgency (Part Two)*.

structure plan that did not consider several missions requiring troops, such as providing security for enemy conventional munitions storage sites.

Our analysis of various iterations of the OIF war plan, which was confirmed by a CENTCOM OIF planner and lessons learned reports, indicated that the OIF war plan did not document risk mitigation strategies if the planning assumptions were proven wrong. One approach to mitigating risks associated with planning assumptions is to develop branch plans. According to joint doctrine,[12] branch plans are options built into the basic war plan to anticipate shifting priorities, changing unit organization and command relationships, or changes to the very nature of the joint operation itself. Branch plans anticipate situations that could alter the basic plan, including those situations resulting from an adversary's action or availability of friendly capabilities or resources. However, we were told by a CENTCOM OIF planner and other senior-level DOD officials that the OIF war plan did not develop a branch plan for an insurgency or otherwise document risk mitigation strategies. The Joint Center for Operational Analysis reported in January 2006 that difficulties and challenges after major combat operations had ended in Iraq resulted from poor planning and resources that did not meet the full range of possible situations.[13] The report also noted that (1) neither CENTCOM nor the Joint Staff took strong action to mitigate risk if assumptions were wrong and (2) the coalition began the postcombat phase without an effective and integrated plan that coordinated the military war planning with civilian planning for the reconstruction of Iraq. Lacking effective branch plans and an integrated postconflict plan, the U.S. government faced several critical problems, including widespread looting of conventional munitions storage sites.

[12]Department of Defense, Joint Chiefs of Staff, *Doctrine for Joint Operations*, Joint Publication 3-0 (Washington, D.C.: Sept. 10, 2001). (An updated version of this publication was published on Sept. 17, 2006.)

[13]U.S. Joint Forces Command, Joint Center for Operational Analysis, *Operation Iraqi Freedom May 2003 to June 2004: Stabilization, Security, Transition, and Reconstruction in a Counterinsurgency (Part One)*.

DOD Did Not Set Up a Program to Centrally Manage and Destroy Iraqi Munitions until after the Completion of Major Combat Operations

Despite prewar intelligence estimates of large amounts of conventional munitions, knowledgeable DOD officials stated that DOD did not set up a central office until July 2003 or set up a program to centrally manage and destroy Iraqi munitions until after August 2003, well after major combat operations were completed in May 2003, because it did not perceive these sites as a threat. The office was set up to address operational problems found during an assessment of nine Iraqi sites. This assessment found that DOD lacked priorities for securing the sites and uniform procedures and practices for securing and disposing of munitions. It also uncovered serious safety problems in the handling, transportation, storage, and disposal of munitions. For example, unsafe handling and storage of conventional munitions resulted in a fire at an Iraqi storage site that injured six soldiers and killed one Iraqi civilian.

In July 2003, the office turned to the U.S. Army Corps of Engineers' Engineering and Support Center and private sector contractors to administer a centrally managed program for the destruction of enemy munitions—called the Coalition Munitions Clearance Program. The Corps' center has personnel experienced in removing and destroying ordnance and explosives and also had contracts in place that could be used to procure services from private sector firms. The Corps and contractor support were needed, according to DOD, because the requirement to secure the large stockpiles would have diverted military personnel from the primary mission of fighting anticoalition forces. Furthermore, military units in theater were unable to destroy the large amounts of enemy munitions.

In August 2003, the Engineering and Support Center also awarded contracts for the Coalition Munitions Clearance Program, and the first demolition of munitions under the program was conducted in September 2003. The program's initial goals were to destroy the stockpiles at six depots and to have all enemy ammunition outside the depots destroyed or transported to the depots. The program also was tasked with assisting in the establishment, management, and transfer of depots to the new Iraqi army.

According to the Engineering and Support Center, at the time of our review the program had received more than $1 billion and has destroyed or secured more than 324,000 tons of munitions. This number, combined with military disposal operations, had accounted for more than 417,000 tons of munitions, leaving an unknown quantity of conventional munitions in the hands of resistance groups or unsecured. The amount of

unaccounted conventional munitions could range significantly from thousands to millions of tons.

Unsecured Conventional Munitions from the Former Regime Continue to Pose a Risk to U.S. Forces and Others

According to MNC-I officials, unsecured conventional munitions from the former regime continue to pose a risk to U.S. forces and others. For example, some conventional munitions storage sites in remote locations have not been assessed recently to verify whether they pose any residual risk. Smaller caches of weapons, munitions, and equipment as well as remaining unexploded ordnance, scattered across Iraq, represent a more pressing and continuing risk, according to the MNC-I officials. These officials said that the coalition is working to reduce this risk by searching for and finding a growing number of caches, but it will be some time before it can clean up all the munitions in Iraq. The extent of the threat from smaller caches, however, is difficult to quantify because the location or amount of munitions hidden or scattered around the country is unknown.

Despite the problems associated with IEDs, DOD does not appear to have conducted a theaterwide survey and risk assessment regarding unsecured munitions in Iraq—the source of explosives for IEDs. In our judgment, given the risk posed by IEDs and looted munitions to the achievement of OIF strategic goals, the Joint Staff needs to determine the theaterwide risk to U.S. forces and others represented by unsecured conventional munitions from the former regime. One risk mitigation strategy, for example, might be to provide more forces for securing conventional munitions storage sites and caches. Such an assessment, as stated in joint doctrine, would assist DOD in conserving lives and resources and avoiding or mitigating unnecessary risk. Furthermore, we believe that DOD should report the risk mitigation strategies and the results of implementing these strategies to Congress to enhance congressional oversight.

Costs of Not Securing Conventional Munitions Storage Sites Have Been High

As reported by DOD and key government agencies, the human, strategic, and financial costs of not securing conventional munitions storage sites have been high. Estimates indicate that the weapons and explosives looted from unsecured conventional munitions storage sites will likely continue to support terrorist attacks throughout the region. Government agencies also assessed that looted munitions are being used in the construction of IEDs. IEDs have proven to be an effective tactic because they are inexpensive, relatively simple to employ, deadly, anonymous, and have

great strategic value.[14] To illustrate, the Congressional Research Service (CRS) reported in 2005 that IEDs caused about half of all U.S. combat fatalities and casualties in Iraq and are killing hundreds of Iraqis. Earlier this year, MNF–I reported that most IED attacks target convoys and patrols. Moreover, MNF-I reported that the attacks against the coalition and its Iraqi partners have continued to increase through July 2006, representing at least 40 percent of all attacks on coalition forces. The deliberate targeting of civilians with IEDs has also increased, although coalition forces remain the primary focus of IED attack.

In addition to the human costs, IEDs have been an effective weapon against the achievement of OIF's strategic goal—establishing a stable Iraqi nation. By maintaining the level of violence against the coalition forces and its Iraqi partners, insurgent groups have sustained the conditions necessary for a nonpermissive environment, adversely affecting reconstruction and economic stabilization efforts and undermining popular support for the Iraqi government and tolerance for the coalition presence. The State Department also reported in July 2006 that the upturn in violence has prevented it from fully engaging its Iraqi partners, noting that a baseline of security is a necessary prerequisite for moving forward on political and economic tasks. As we reported in July 2006,[15] poor security conditions have impinged on U.S. and Iraqi government efforts to revitalize Iraq's economy and restore essential services in the oil and electricity sectors. A task force for the Defense Science Board also stated that the continued injuries and loss of life among Iraqi civilians—because of IEDs—will diminish the viability and political acceptance of the new Iraqi government and will have a negative effect on the U.S. ability to shift the burden of responsibility for security and operations to the Iraqi Security Force.[16]

Furthermore, DOD has spent about $4.9 billion from fiscal years 2004 through 2006 on countering an IED campaign in Iraq that continually evolves, making DOD's countermeasures less effective. For example, the Defense Science Board reported in April 2006 that to date, the bulk of the counter-IED efforts have been based on technical means, which are

[14]Congressional Research Service, *Improvised Explosive Devices in Iraq: Effects and Countermeasures*, RS22330 (Washington, D.C.: Nov. 23, 2005).

[15]GAO, *Rebuilding Iraq: More Comprehensive National Strategy Needed to Help Achieve U.S. Goals and Overcome Challenges*, GAO-06-953T (Washington, D.C.: July 11, 2006).

[16]Defense Science Board, *Task Force on Improvised Explosive Devices* (Washington, D.C.: April 2006).

defensive and reactive, such as jammers and up-armor, to which the enemy quickly adapts, making these efforts less effective.[17] The report's principle theme is that the IED battle cannot be won by playing defense at the tactical level—that is, the employment of units in combat—but rather by offensive operations at a higher level strategic campaign. In addition, the Joint Forces Command in a recent handbook recognizes that a focus on technology can lead to an "evolving dialectic contest between the IED bomber and the target."[18] For example, the handbook noted that when U.S. forces began looking for wires, the bombers began using garage door openers, cell phones, or toy car remote controls to detonate the devices. The enemy is devising IEDs that can penetrate armor. Furthermore, if U.S. countermeasures are effective, then the enemy's first response will be to change the target to go after other coalition forces or the Iraqi military and civilians.

To develop a more strategic approach to countering IEDs, DOD established the Joint IED Defeat Organization (JIEDDO) in February 2006. JIEDDO is to combine the best technology solutions for combating IEDs with relevant intelligence and innovative operational methods. The Defense Science Board's task force reviewed the blueprint for JIEDDO and stated that the JIEDDO is a step in the right direction. However, the task force expressed concerns that JIEDDO still appeared to be almost entirely focused on defense. GAO has been asked to review JIEDDO and its efforts to counter IEDs in a separate congressional request.

[17]Defense Science Board, April 2006.

[18]U.S. Joint Forces Command, Joint Warfighting Center, *Organizing for IED Defeat at the Operational Level* (Washington, D.C.: Feb. 23, 2006).

DOD's Actions in Response to OIF Lessons Learned Have Not Focused on Securing Conventional Munitions Storage Sites during Future Operations

While DOD has taken many actions in response to OIF lessons learned, we found that to date DOD has not taken action to incorporate the security of an adversary's conventional munitions storage sites as a strategic planning and priority-setting consideration during planning for future operations. Despite the strategic implications, military policy and guidance, such as joint doctrine, have not been revised to address the security of these sites. Instead, DOD is revising joint doctrine on the basis of OIF lessons learned on countering IEDs, but DOD has been understandably focused on current rather than future operations. A critical OIF lesson learned is that unsecured conventional munitions storage sites can be an asymmetric threat to U.S. forces. For example, one potential adversary has considerable munitions stockpiles that would require a sizable occupying force to secure or destroy.

Despite the Strategic Implications, Securing Conventional Munitions Storage Sites Is Not Explicitly Addressed in Military Policy and Guidance

Despite the strategic implications regarding unsecured conventional munitions storage sites, our analysis shows that securing those sites generally is not explicitly addressed in military policy and guidance, particularly at the joint level. We reviewed 17 DOD publications—which Joint Staff officials told us were relevant to our review—to determine the extent to which each of those publications contained guidance on the security of conventional munitions storage sites. A list of these publications can be found in appendix II. Of these 17 DOD publications, 5 are either in development or in the process of being updated. The DOD publications we reviewed included the following:

- Three CJCS publications, which provide standardization to the joint planning system used for the execution of complex multiservice exercises, campaigns, and operations. For example, the CJCS manual, *Joint Operation Planning and Execution System (JOPES)*, *Volume I*,[19] provides military guidance for the exercise of authority by combatant commanders and other joint force commanders and prescribes doctrine and selected joint tactics, techniques, and procedures for joint operations and training. It provides military guidance for use by the armed forces in preparing their appropriate plans. More specifically, JOPES is a DOD-wide management information process that is used for planning and executing force deployments.

[19]Chairman of the Joint Chiefs of Staff,, *Joint Operation Planning and Execution System (JOPES)*, *Volume I (Planning Policies and Procedures)*, CJCSM 3122.01 (Washington, D.C.: Oct. 22, 2004).

- Ten joint doctrine publications that guide U.S. military forces toward a common objective and represent what is taught, believed, and advocated as what is right (i.e., what works best). Joint doctrine serves to make U.S. policy and strategy effective in the application of U.S. military power.

- Two multiservice TTPs that are to provide tactical guidance on the actions and methods that implement doctrine agreed to by two or more services.

- One service TTP that is to provide tactical guidance on the actions and methods that implement service-level doctrine.

- The draft joint IED defeat handbook that will be used to test and validate counter-IED approaches.

In reviewing these documents, we found little evidence of guidance regarding conventional munitions storage site security. Although several publications addressed defeating IEDs during an insurgency after major combat operations have ended or provided tactical-level guidance on how to dispose of explosive hazards, including munitions, or rending those hazards safe, none explicitly addressed the security of conventional munitions storage sites during or after major combat operations as a tactical, operational, or strategic risk. For example, the joint publication, *Barriers*, *Obstacles*, *and Mine Warfare* (Draft, Feb. 28, 2006), was updated to include a section on IEDs, but the guidance does not discuss securing conventional munitions storage sites as a way to limit the availability of supplies needed to make IEDs.[20] Moreover, conventional munitions storage sites, if mentioned at all, were not specifically addressed in the military guidance we reviewed. For example, the TTP for sensitive sites provides tactical-level guidance for Army forces conducting operations in a combat zone known or suspected to contain highly sensitive enemy facilities. In the case of OIF, we were told that this guidance applied to the search of Iraqi military facilities, which included any conventional munitions storage sites that the United States thought contained WMD.[21] However, the Army's TTPs did not require the security

[20]Joint Staff, *Barriers*, *Obstacles*, *and Mine Warfare for Joint Operations*, JP 3-15 (Washington, D.C.: Feb. 28, 2006).

[21]U.S. Army, Futures Development and Integration Center, U.S. Army Combined Arms Center, *Tactics*, *Techniques*, *and Procedures for Tactical Operations Involving Sensitive Sites*, *Version 1* (Washington, D.C.: December 2002).

of conventional munitions storage sites that were searched and found not to contain WMD. In addition, the IED defeat handbook recognizes that conventional munitions storage sites are likely to be the primary source of explosives for IEDs, but the handbook does not directly address the importance of securing those sites during or after major combat operations as part of a strategic campaign to counter IED use by adversaries. Finally, although the multiservice TTPs for the EOD function include a tactical planning checklist that suggests performing an intelligence estimate of information necessary to counter the IED threat, this checklist does not mention conventional munitions storage sites.

Since DOD states that joint doctrine is to present fundamental principles that guide the employment of forces, we believe that it is important that DOD clearly and explicitly address the security of conventional munitions storage sites in revisions to joint doctrine. We also believe that the security of those storage sites should be addressed in the CJCS policy, guidance, and procedures in planning for future operations because of the strategic implications of unsecured sites. To illustrate the strategic implications, Iraqi conventional munitions storages sites have been a major source of explosives for IEDs and consequently have contributed to the sustained operations of Saddam Hussein loyalists, internal factions, and external terrorists. This ability to sustain operations, in turn, has adversely affected the ability of U.S. and coalition forces to achieve the OIF strategic goal to create a stable, democratic government in Iraq. Without appropriate joint policy, doctrine, guidance, and procedures, DOD cannot ensure that OIF lessons learned regarding the security of an adversary's conventional munitions storage sites will be integrated into all levels of future operations planning and execution.

DOD's Actions in Response to OIF Lessons Learned Have Emphasized Countering IED Campaigns during an Insurgency

Because of DOD's understandable focus on current operations, the department's actions in response to OIF lessons learned generally have emphasized countering the use of IEDs by an insurgency or terrorists during posthostility operations. Among the actions that DOD has taken are the following:

- **Army safety policy for captured enemy ammunition:** In response to accidents resulting in 26 fatalities and 70 injuries, the Army issued a safety policy in 2004 on how commanders were to handle enemy munitions at the tactical level. This policy primarily emphasized the protection of U.S. personnel and assets from accidental detonations. However, it also stated that during wartime operations the commander must determine—based on safety,

security, and intelligence considerations—whether enemy munitions will be destroyed, moved, or held in place. The policy also holds the commander responsible for securing enemy munitions until their final disposition, but as tactical-level guidance it does not ensure that appropriate force levels or other resources are provided to the commanders to secure those sites.

- **Interim Army and Marine Corps manual on IED defeat:**[22] The manual incorporates OIF lessons learned to provide commanders, leaders, and staff with fundamental principles and TTPs for the defeat of an adversary's IED operations. The manual also articulates an IED defeat framework that provides guidance on proactive and reactive actions U.S. forces can take to predict, detect, prevent, avoid, neutralize, and protect against IED events. One of those actions is to target adversary supplies, including munitions caches. Another action is to keep friendly forces from IEDs when prevention activities are not possible or have failed—in other words, after an adversary has begun an IED campaign against U.S. forces.

- **Joint assessment of the EOD capability:** The Joint Staff assessed the EOD capability of the U.S. armed forces to identify recommendations for change to move toward the establishment of a more joint and integrated EOD force. An OIF lesson learned is that U.S. forces did not have enough EOD support to deal with the massive quantities of Iraqi munitions. Knowledgeable DOD officials said that EOD planning for OIF occurred as an afterthought, with the deployment of EOD personnel into Iraq being a low priority at the beginning of the invasion. To address this issue, the Joint Staff is recommending that DOD establish a single organization, a Joint EOD support element, at the Joint Forces Command that would not only review combatant commanders' operational plans and requests for EOD forces, but would also provide, on demand, additional personnel to assist during operational planning, thereby ensuring necessary involvement and consideration of EOD throughout the planning process.[23] The report also noted that EOD

[22]Department of Defense, *Improvised Explosive Device Defeat*, FMI 3-34.119/MCIP 3-17.01 (Washington, D.C.: September 2005).

[23]Department of Defense, Joint Staff, *Final Report of Assessment for Joint Explosive Ordnance Disposal* (Washington, D.C.: July 31, 2006).

personnel reiterated that a lack of dedicated transportation and adequate security for responding EOD forces was a recurring problem and caused a lag between incident reporting and EOD response. Therefore, the Joint Staff is recommending that joint EOD forces be issued common "warfighting" equipment, such as communications and vehicles, and "dedicated security support."

- **Joint systems approach to counter IEDs as an emerging threat to U.S. forces:** DOD has developed a joint "enemy IED activity model" in response to criticisms that its IED defeat efforts have been too centered on technological solutions, such as jammers and up-armor, which are defensive and reactive. The activity model is to provide a thorough understanding of the enemy and the common activities, such as material procurement and bomb making, associated with an IED attack. By attacking or isolating one or more of the model's key activities, DOD believes that commanders can mount an offensive campaign to prevent the adversary from achieving its goals through the use of IEDs.

These actions are good first steps toward broadening DOD's focus beyond the ongoing tactical and operational counter-IED efforts used against Saddam loyalists, rejectionists, or external terrorist groups in Iraq to planning and executing strategic counter-IED campaigns for future operations. However, the actions do not directly address the strategic importance of securing conventional munitions storage sites during major combat operations so that they do not become the source of materials for making IEDs during an occupation or become used for other forms of armed resistance. For example, while the Army's safety policy holds units responsible for securing enemy munitions, it does not provide guidance on the security of conventional munitions storage sites during major combat operations. As tactical guidance, the policy also does not provide the commander with direct guidance on how to balance the requirement to provide security of enemy munitions with DOD's emphasis on rapid tempo during major combat operations. Without strategic and joint guidance, the forces or other resources needed to secure conventional munitions sites are unlikely to be considered in planning for future operations. Additionally, the joint EOD assessment discusses the importance of EOD units having dedicated security forces but does not include those forces as a component of EOD units. Instead, DOD officials told us that the units are to rely on combat units for personnel as well as site security.

A Critical OIF Lesson Learned Is That Unsecured Conventional Munitions Storage Sites Can Be an Asymmetric Threat to U.S. Forces

Based on our work, a critical OIF lesson learned is that unsecured conventional munitions storage sites can represent an asymmetric threat to U.S. forces during future operations. Furthermore, other potential adversaries are also learning lessons from the United States' experiences in Iraq and will likely use asymmetric warfare against U.S. invading forces. We believe these potential adversaries will likely develop military doctrine to avoid direct military confrontation with the United States if possible and try to undermine the United States' political commitment with unconventional warfare. Therefore, the number, size, and geographic separation of an adversary's munitions storage sites could pose a significant security challenge during an occupying force's follow-on operations. A large amount of munitions in such an adversary's country could require an occupying force to dedicate significant manpower to secure or destroy the contents of the major munitions storage sites. Furthermore, the remnants of an adversary's forces, insurgents, or terrorists could draw from any large conventional munitions storage network left unsecured by an occupying force.

Conclusions

A fundamental gap existed between the OIF war plan assumptions and the experiences of U.S. and coalition forces in Iraq, contributing to insufficient troops being on the ground to prevent widespread looting of conventional munitions storage sites and resulting in looted munitions being a continuing asymmetric threat to U.S. and coalition forces. The human, strategic, and financial costs of this failure to provide sufficient troops have been high, with IEDs made with looted munitions causing about half of all U.S. combat fatalities and casualties in Iraq and killing hundreds of Iraqis. The United States may be facing even higher costs as the continuing violence in Iraq, fueled by munitions used in IEDs, threatens achievement of OIF war plan's strategic goal to create a stable Iraqi nation. DOD does not appear to have conducted a theaterwide survey and assessment of the risk associated with unsecured conventional munitions storage sites to U.S. forces and others. Such a survey and assessment combined with associated risk mitigation strategies—such as providing more troops or other security measures—could assist DOD in conserving lives and in meeting its strategic goal to leave a stable nation behind when U.S. forces ultimately leave Iraq. Moreover, Congress has expressed its concern over looted munitions and their use against U.S. forces and others. Given the seriousness of this issue, DOD should facilitate congressional oversight by reporting on the results of the theaterwide survey and risk assessment as well as the related mitigation strategies.

Prospectively, DOD's actions in response to OIF lessons learned primarily have focused on countering IEDs and not on the security of conventional

munitions storage sites as a strategic planning and priority-setting consideration for future operations. Although good first steps, these actions do not address what we believe is a critical OIF lesson learned, the strategic importance of securing conventional munitions storage sites during and after major combat operations. As illustrated by DOD's experience in Iraq and assessments regarding a potential adversary, the widespread looting of unsecured conventional munitions storage sites in Iraq is not likely to be an anomaly or only a tactical-level issue. Instead, unsecured conventional munitions storage sites can represent an asymmetric threat to U.S. forces that would require significant manpower or other resources during and after major combat operations to secure. Therefore, since joint doctrine is to present fundamental principles as well as contemporary lessons that guide the employment of forces, we believe that it is important that DOD clearly and explicitly address the security of conventional munitions storage sites in revisions to joint doctrine. We also believe that the security of those storage sites should be addressed in the CJCS policy, guidance, and procedures in planning for future operations because of the strategic implications of unsecured sites. Until joint policy, guidance, and procedures are revised to incorporate fundamental principles and lessons learned about the strategic and operational implications of an adversary's conventional munitions storage sites, DOD's planning for future operations may not set priorities or establish assumptions that address this critical lesson learned, potentially increasing the operational risk for U.S. forces and the achievement of U.S. strategic goals and military objectives. Furthermore, if revised as recommended, joint policy, guidance, and procedures should result in an integrated approach that includes securing conventional munitions storage sites as a risk mitigation strategy in planning and executing future operations.

Recommendations for Executive Action

We are making the following three recommendations to DOD. To develop risk mitigation strategies for the current threat in Iraq posed by looted munitions and enhance congressional oversight, we recommend that the Secretary of Defense direct the Chairman of the Joint Chief of Staff to

- conduct theaterwide survey and risk assessment regarding unsecured conventional munitions in Iraq, and
- report ensuing risk mitigation strategies and the results of those strategies to Congress.

To better mitigate the asymmetric risk associated with an adversary's conventional munitions storage sites for future operations, we recommend

that the Secretary of Defense direct the CJCS to incorporate conventional munitions storage site security as a strategic planning factor into all levels of planning policy and guidance, including joint doctrine, instructions, manuals, and other directives.

Agency Comments and Our Evaluation

In written comments on a draft of this report, DOD partially concurred with our three recommendations. DOD's written comments are reprinted in their entirety in appendix III.

DOD partially concurred with our first recommendation that the department conduct a theaterwide survey and risk assessment regarding unsecured conventional munitions in Iraq. DOD stated that while it is imperative that a complete and thorough assessment of conventional munitions storage sites be conducted, military commanders in theater are aware of the significant risk posed by the sites, and similar studies and assessments have been conducted over the past 3 years. DOD also stated that from a manpower perspective, an in-depth, theaterwide survey is not feasible without significantly degrading ongoing efforts in Iraq and the region. As the evidence in our report clearly supports, we made this recommendation because we did not see any evidence of a strategic-level survey or an effective, theaterwide risk mitigation strategy to address the commanders' awareness of this significant risk or the findings of the studies and assessments regarding security of conventional munitions storage sites. Accordingly, the intent behind our recommendation is to have DOD assess the risks associated with unsecured conventional munitions sites on a strategic, theaterwide basis to develop an effective risk mitigation strategy. In developing courses of action for this risk mitigation strategy, if DOD determines that additional U.S. forces are needed to adequately secure Iraqi conventional munitions storage sites while also conducting the ongoing warfighting mission, then those troops should be requested and provided.

DOD partially concurred with our second recommendation that the department report ensuing risk mitigation strategies and the results of those strategies to Congress. In commenting on this recommendation, DOD stated that risk mitigation is doctrinally sound; however, the department and Joint Staff recommend that these briefings to Congress remain at the strategic level. In making this recommendation, it was not our intention to detract tactical units from the current warfighting mission or to suggest congressional oversight is needed for each tactical unit. Instead, we are recommending that DOD alert Congress of its assessment

and the actions being taken to mitigate the strategic risk associated with unsecured conventional munitions in Iraq.

DOD partially concurred with our third recommendation that the department incorporate the security of conventional munitions storage sites as a strategic planning factor into all levels of planning policy and guidance and stated that the Joint Staff will incorporate the appropriate language in joint doctrine, manuals, and instructions. DOD also stated that the security and demolition of captured conventional munitions must be properly resourced. Finally, DOD stated that (1) Iraq is a separate case and should not be considered the standard for all future operations and (2) war plans must reflect proper prioritization based on desired operational effects and resources available, as it may not always be possible or desirable in a resource- and time-constrained environment to secure all sites or destroy all munitions. We agree with these statements. The purpose of this report was not to suggest that Iraq be the standard for all future conflicts or to restrict commanders' planning prerogatives. Instead, the report suggests that as DOD incorporates OIF lessons learned into joint doctrine, it includes what is a key OIF lesson learned—an adversary's stockpile of conventional munitions can be an asymmetric threat to U.S. forces. Therefore, the security of conventional munitions storage sites should be considered as one of the many factors involved in planning major combat operations. Furthermore, the risk associated with not having enough time or troops to secure those sites should be made explicit during the planning process so that mitigation strategies can be developed. As DOD's own comments indicate, the manpower resources needed to address conventional munitions storage sites in Iraq may not be available. Incorporating the security of conventional munitions storage sites as a strategic planning factor in planning for future conflicts would help ensure that future planners consider the manpower needed to secure and destroy an adversary's conventional munitions storage sites during major combat operations.

Lastly, we did not assess or report on the adequacy of intelligence resources to monitor or track conventional munitions storage sites. Instead, our objectives were to examine (1) the security provided by U.S. forces over Iraqi conventional munitions storage sites and (2) DOD's actions to mitigate risks associated with an adversary's conventional munitions storage sites for future operations on the basis of OIF lessons learned. While we acknowledge that DOD relies on intelligence resources to assist the department in assessing risks, monitoring potential adversaries, and planning operations, the focus of our report was on the physical security of conventional munitions storage sites captured from

the former regime during OIF—a task that was not the responsibility of intelligence resources.

If you or your staffs have any questions concerning this report, please contact me at (202) 512-5491 or dagostinod@gao.gov. Contact points for our Office's of Congressional Relations and Public Affairs may be found on the last page of this report. Major contributors to this report were Michael Kennedy, Assistant Director; Renee Brown; Donna Byers; Brian Pegram; and Nicole Volchko.

Davi M. D'Agostino
Director, Defense Capabilities and
Management

List of Congressional Committees

The Honorable Carl Levin
Chairman
The Honorable John McCain
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable Joseph R. Biden, Jr.
Chairman
The Honorable Richard G. Lugar
Ranking Minority Member
Committee on Foreign Relations
United States Senate

The Honorable Joseph I. Lieberman
Chairman
The Honorable Susan M. Collins
Ranking Minority Member
Committee on Homeland Security and Governmental Affairs
United States Senate

The Honorable Ike Skelton
Chairman
The Honorable Duncan Hunter
Ranking Minority Member
Committee on Armed Services
House of Representatives

The Honorable Henry A. Waxman
Chairman
The Honorable Tom Davis
Ranking Minority Member
Committee on Oversight and Government Reform
House of Representatives

The Honorable Tom Lantos
Chairman
The Honorable Ileana Ros-Lehtinen
Ranking Minority Member
Committee on Foreign Affairs
House of Representatives

Appendix I: Scope and Methodology

To assess the security provided by the Department of Defense (DOD) over conventional munitions storage sites captured in Iraq, we reviewed DOD, Joint Staff, and service policies, guidance, procedures, and plans. We obtained documentation from and interviewed officials from the U.S. Joint Forces Command; the U.S. Central Command (CENTCOM); U.S. Army Forces Command; Third Army, which is also the U.S. Army Central and Coalition Forces Land Component Command; Joint IED Defeat Task Force; Defense Intelligence Agency; National Geospatial-Intelligence Agency, National Ground Intelligence Center; and Central Intelligence Agency. We also obtained documentation from and interviewed officials from the Joint Staff, including the J-3 Operations Directorate; J-7 Operational Plans and Joint Force Development; and J-8 Force Structure, Resources, and Assessment Directorate. In addition, we interviewed previous command officers and active duty personnel who served as operational war planners prior to Operation Iraqi Freedom (OIF). We also interviewed field commanders and explosive ordnance disposal specialists on the challenges faced by U.S. troops during OIF. Moreover, we asked to meet with the former CENTCOM commander, General Tommy Franks, who was responsible for the OIF war planning, but he declined to meet with us. To assist in determining the type of security provided by U.S. forces for conventional munitions storage sites captured in Iraq, we reviewed various iterations of operational plans and stability plans prepared by CENTCOM and the Coalition Forces Land Component Command. We also analyzed briefings, reports, and intelligence assessments from the Defense Intelligence Agency, Central Intelligence Agency, Multi-National Corps-Iraq, National Geospatial-Intelligence Agency, U.S. Army Central Command, and U.S. Army National Ground Intelligence Center.

To assess DOD's actions to mitigate risks associated with an adversary's conventional munitions storage sites for future operations on the basis of OIF lessons learned, we examined joint staff and service-specific lessons learned from OIF on the securing of munitions storage sites in Iraq. We also reviewed joint and multiservice doctrines, tactics, techniques, and procedures; and the Joint IED Defeat handbook to determine how those documents address the security of conventional munitions storage sites. Through structured coding and analysis of the documents, we consistently verified the information from the doctrine. We discussed with CENTCOM operational planners and other officials, as well as brigade commanders, intelligence provided to field commanders prior to the invasion, as well as the challenges encountered once combat began in Iraq. We also discussed DOD's efforts to identify and document lessons learned with officials from U.S. Joint Forces Command, Joint Center for Operational Analysis,

CENTCOM Lessons Learned, Center for Army Lessons Learned, and Marine Corps Center for Lessons Learned and reviewed service after-action reports and fragmentary orders.

We performed our work from November 2005 through October 2006 in accordance with generally accepted government auditing standards.

Appendix II: Analysis of Military Guidance Contained in 17 DOD Publications

We reviewed 17 Department of Defense (DOD) publications—which Joint Staff officials told us were relevant to our review—to determine the extent to which each of those publications contained guidance on the security of conventional munitions storage sites. To determine to what extent OIF lessons learned concerning the security of conventional munitions storage sites are being incorporated into military guidance, we reviewed 15 DOD publications that have been published since May 2003, the end of major combat operations in Iraq, and 5 joint publications currently under revision. We also reviewed military guidance that was applicable during the OIF war planning to determine to what extent the security of conventional munitions storage sites was explicitly addressed. Of the 17, only 1 publication, *Tactics*, *Techniques*, *and Procedures for Tactical Operations Involving Sensitive Sites (ST 3-90.15)*, December 2002, provides tactical-level guidance on the security of sensitive military facilities in general, which could be interpreted to include conventional munitions storage sites. DOD officials told us that this guidance was used in OIF during the search and exploitation for intelligence purposes of sensitive sites thought to contain WMD.

As shown in table 1, to assess these publications for the applicability of securing conventional munitions storage sites, we systematically reviewed them. We analyzed each document and also conducted a word search using key terms[1] and then coded the information in the data collection instrument and verified the interpretation of the coding to ensure accuracy. We selected these terms to provide a broad search of all topics that might address the security of conventional munitions storage sites.

[1]Key terms include Depot, Ammunition Supply Point, Ammunition Storage Point, ASP, Caches, Captured Enemy Ammunition, CEA, Explosive Remnants of War, ERW, Improvised Explosive Device, and IED/IEDs.

Table 1: Extent Existing Joint and Multiservice Doctrine Addressed the Security of Conventional Munitions Storage Sites

Publication	Description	Generally addresses[a]	Does not address[b]
Joint Chiefs of Staff Manual	Provides (1) planning policies and procedures to govern the joint activities and performance of the armed forces of the United States; (2) military guidance for the exercise of authority by combatant commanders and other joint force commanders and doctrine and selected joint tactics, techniques, and procedures for joint operations and training; and (3) military guidance for use by the armed forces in preparing their appropriate plans.		
Joint Operation Planning and Execution System Volume I, *Planning Policies and Procedures*, October 22, 2004	Provides the policy guidance and procedures for the development, coordination, review, approval, and implementation of joint operational plans and operational orders.		X
Joint Operation Planning and Execution System Volume II, *Planning Formats*, February 28, 2006	Provides instructions for preparing operations plans, and is functionally oriented and provides directional, procedural, and planning guidance key to certain plan annexes.		X
Joint Operation Planning and Execution System Volume III, *Crisis Action Time-Phased Force and Deployment Data Development and Deployment Execution*, July 19, 2006	Provides the procedures for the development of time-phased force and deployment data and for the deployment and redeployment of forces within the context of the Joint Operation Planning and Execution System in support of joint military operations, force rotations, and exercises.		X
Joint doctrine	Provides the fundamental principles that guide the employment of U.S. military forces in coordinated action toward a common objective and is authoritative, but requires judgment in application.		
JP3-10, *Joint Security Operations in Theater*, August 1, 2006	Provides military guidance for the exercise of authority for combatant commanders and other Joint Force Commands and prescribes joint doctrine for operations and training.		X

Publication	Description	Generally addresses[a]	Does not address[b]
JP 3-0, *Joint Operations*, December 23, 2005	Provides the doctrinal foundation and fundamental principles that guide the Armed Forces of the United States in conduct of joint operations across the range of military operations.		X
JP 3-07.2, *Antiterrorism*, April 14, 2006	Provides doctrine on how to organize, plan, train for, and conduct joint antiterrorism operations.		X
JP 3-15, *Barriers, Obstacles, and Mine Warfare for Joint Operations*, February 28, 2006 (Revision First Draft)	Provides doctrinal guidance for planning and executing barrier, obstacle, and mine warfare for joint operations as they relate to strategic operational and tactical mobility and countermobility across the range of military operations.		X
JP 3-31, *Command and Control for Joint Land Operations*, March 23, 2004	Provides guidance for the planning and conduct of land operations by joint forces under the command and control of a joint force land component commander in an area of operation.		X
JP 3-34, *Joint Engineer Operations*, May 14, 2006 (Revision)	Provides the joint doctrine necessary to plan, coordinate, and conduct timely and tailored joint engineer operations across the range of military operations.		X
JP 3-40, *Joint Doctrine for Combating Weapons of Mass Destruction*, July 8, 2004	Provides the principles to plan for and conduct operations for combating weapons of mass destruction and their means of delivery.		X
JP 3-54, *Operations Security*, August 11, 2005 (Revision)	Provides (1) fundamental principles and doctrine for planning, preparation, and execution of operations security in joint operations; and (2) procedures for conducting operations security assessments.		X
JP 5-0, *Joint Operation Planning*, July 21, 2006 (Draft)	Provides the military's contribution to national strategic planning consisting of joint strategic planning with its three subsets: security cooperation planning, joint operation planning, and force planning.		X

Publication	Description	Generally addresses[a]	Does not address[b]
JP 5-00.1, *Joint Doctrine for Campaign Planning*, January 25, 2002	Provides overarching guidance and principles governing the planning of campaigns at the combatant command and subordinate joint force levels.		X
Joint handbook	Provides approaches and strategic, operational, and tactical guidance to U.S. forces.		
Joint IED Defeat Handbook, February 23, 2006	Provides validation of lessons learned, documents current best practices, and provides a model needed to conduct future Improvised Explosive Device defeat operations.		X
Multiservice Publication	Provides principles; terms; and tactics, techniques, and procedures used by the forces of two or more services to perform a common military function. It may include differing perspectives on operational employment and is authoritative to the same extent as other service publications but requires judgment in application. It also must be consistent with approved joint publications.		
Unexploded Explosive Ordnance (UXO): Multiservice TTP for Unexploded Explosive Ordnance Operations, August 2005	Provides descriptions of UXO threats and provides guidelines to minimize the impact of UXO hazards. It provides warfighting personnel at the operational and tactical levels with information to optimize UXO safety and to increase efficiency, while reducing or eliminating losses of personnel and equipment to UXO hazards.		X
EOD Multiservice TTP for Explosive Ordnance Disposal in a Joint Environment, October 2005	Provides guidance and procedures for the employment of a joint explosives ordnance disposal force. It assists commanders and planners in understanding the Explosive Ordnance Device capabilities of each service.		X
Service tactics, techniques, and procedures (TTP)	Provides doctrine and TTP that have been published and contain references to publications where users may obtain more detail.		

Publication	Description	Generally addresses[a]	Does not address[b]
ST 3-90.15, TTP for Tactical Operations Involving Sensitive Sites, December 2002	Provides definitions of sensitive sites and develops the tactical context in which Army forces may be required to deal with them. The capture and subsequent exploitation of sensitive sites may be crucial to the outcome of a campaign.	X	

Source: GAO analysis of military guidance, including Joint Chiefs of Staff manuals; joint and service doctrine; handbooks; and tactics, techniques, and procedures.

[a]Generally addresses: Document addresses the security of key terms searched in the document.

[b]Does not address: Document does not address the security of key terms searched in the document.

Appendix III: Comments from the Department of Defense

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON DC 20301-2400

DEFENSE
RECONSTRUCTION
SUPPORT OFFICE

Ms. Davi M. D'Agostino
Director, Defense Capabilities and Management
U.S Government Accountability Office
441 G Street N.W.
Washington, DC 20548

DEC - 1 2006

Dear Ms. D'Agostino,

This is the Department of Defense (DoD) response to the GAO draft report, "OPERATION IRAQI FREEDOM: DOD Should Apply Lessons Learned Concerning the Need for Security over Conventional Munitions Storage Sites to Future Operations Planning," dated November 8, 2006 (GAO Code 350770/GAO-07-71C). The Department partially concurs with all three recommendations with comment.

Recommendation 1: The GAO recommended that the Secretary of Defense direct the Chairman, Joint Chiefs of Staff to conduct theater-wide survey and risk assessment regarding unsecured conventional munitions in Iraq.

DOD Response: Partially Concur: The report highlights the significant risk posed by unsecured, conventional munitions sites in Iraq. While it is imperative that a complete and thorough assessment of ammunition sites be conducted, these findings are not new and military commanders in theater are aware of this issue. The Iraqi Survey Group and other Coalition entities over the past 3 years have conducted similar studies and assessments, and those findings were reported and recorded to commanders who have appropriately prioritized securing these sites and conducted demolition of these munitions across the country. The need for yet another survey would have to be balanced against the manpower requirement currently dedicated to combat and training operations essential to our efforts to stabilize Iraq and provide a security force which can provide for Iraqi self-reliance. The Joint Staff will be requesting additional comment from USCENTCOM and its component headquarters to comment more fully on this matter and determine the feasibility of the proposed recommendation.

From an intelligence resourcing perspective, an in-depth, theater-wide survey to identify unsecured conventional munitions in Iraq is not feasible without significantly degrading ongoing efforts in Iraq or the region. Commanders are clearly aware of the danger these munitions pose to operations, strategic or otherwise, and are mitigating that threat as they are able.

Recommendation 2: The GAO recommended that the Secretary of Defense direct the Chairman, Joint Chiefs of Staff to report ensuing risk mitigation strategies and the results of those strategies to Congress.

DOD Response: Partially Concur. Recommendation 2 is directly related to the first. The risk mitigation strategies and results would be reported to Congress following the theater-wide survey and risk assessments.

Risk mitigation is doctrinally sound and is incorporated into all planning at every echelon. However, the Department and Joint Staff recommend that these briefings to Congress remain at the strategic level. If tactical units are obliged to devote time to maintaining a constant congressional-level feed to build these products, it will detract from the current war-fighting missions.

Recommendation 3: The GAO recommended that the Secretary of Defense direct the Chairman, Joint Chiefs of Staff to incorporate conventional munitions storage sites security as a strategic planning factor into all levels of planning policy and guidance, including joint doctrine, instructions, manuals, and other directives.

DOD Response: Partially Concur. The Joint Staff will incorporate the appropriate language in joint doctrine, Chairman of the Joint Chiefs of Staff manuals, and instructions during the normal revision process with the caveat that Iraq is a separate case and should not be considered as the standard for all future conflicts when it comes to the level of ordnance distributed across a country.

Conventional weapons and/or munitions storage sites' control and security should be incorporated into plans but securing and demolition must be properly resourced. This should be one of many factors already addressed in operational preparation of the environment.

One should not dictate that intelligence resources must be dedicated to monitoring one target versus another, which restricts commanders' prerogatives and stifles planning operations. These plans must also reflect proper prioritization based on desired operational effects and resources available as it may not always be possible or desirable in a resource- and time-constrained environment to secure all sites or destroy all munitions.

The Department appreciates the opportunity to comment on the draft report. For further questions concerning this report, please contact the undersigned at 703-692-5161 or victor.rostow@wso.whs.mil.

Sincerely,

Victor A.D. Rostow
Director (A)
Defense Reconstruction Support Office

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