

# Inspector General

United States  
Department of Defense



Marine Corps Response to Nonlethal Laser Dazzler  
Urgent Request

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## Acronyms and Abbreviations

ANSI	American National Standards Institute
CDIB	Capabilities Development and Integration Board
CFR	Code of Federal Regulations
CHPLD	Compact High Power Laser Dazzler
GBD-IIIC	Green Beam Designator-III Custom
IG	Inspector General
LSRB	Laser Safety Review Board
MARADMIN	Marine Corps Administrative Message
MARCORSYSCOM	Marine Corps Systems Command
MCCDC	Marine Corps Combat Development Command
MCO	Marine Corps Order
MEF	Marine Expeditionary Force
MNF-W	Multi-National Force-West
MROC	Marine Corps Requirements Oversight Council



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
400 ARMY NAVY DRIVE  
ARLINGTON, VIRGINIA 22202-4704

February 9, 2011

MEMORANDUM FOR COMMANDANT OF THE MARINE CORPS  
ASSISTANT COMMANDANT OF THE MARINE CORPS  
NAVAL INSPECTOR GENERAL  
DEPUTY COMMANDANT FOR COMBAT DEVELOPMENT AND  
INTEGRATION  
INSPECTOR GENERAL OF THE MARINE CORPS

SUBJECT: Marine Corps Response to Nonlethal Laser Dazzler Urgent Request  
(Report No. D-2011-037)

We are providing this report for your information and use. We considered management comments on a draft of this report when preparing the final report. At the request of the Assistant Commandant of the Marine Corps, we reviewed the Marine Corps decisionmaking process for responding to the urgent request of deployed Marines for a nonlethal laser dazzler capability. Marines needed this capability to more effectively secure checkpoints and convoys in Iraq by temporarily obscuring the vision of civilians and deterring those civilians from getting too close and triggering an unnecessary escalation of force incident. Delays left Marines deployed to Iraq in 2006 without a critical nonlethal weapon to more effectively perform security missions for nearly 6 months. However, we did not find any evidence of criminal negligence in Marine Corps processing of the July 2005 laser dazzler urgent request.

The comments from the Deputy Commandant for Combat Development and Integration are responsive and conform to the requirements of DoD Directive 7650.3. Therefore, we do not require any additional comments.

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-9201 (DSN 664-9201).

A handwritten signature in black ink, reading "Richard B. Jolliffe", is positioned above the typed name.

Richard B. Jolliffe  
Assistant Inspector General  
Acquisition and Contract Management





# Results in Brief: Marine Corps Response to Nonlethal Laser Dazzler Urgent Request

## What We Did

The Assistant Commandant of the Marine Corps requested that we review the Marine Corps decisionmaking process regarding the urgent need for a nonlethal laser dazzler capability (see figure for an example of a nonlethal laser dazzler). Marines needed this capability to more effectively secure checkpoints and convoys in Iraq by temporarily obscuring the vision of civilians and deterring those civilians from getting too close and triggering an unnecessary escalation of force incident. However, Marines did not receive a materiel solution for this dazzler capability during their forward deployment in 2006. The II Marine Expeditionary Force requested the capability in 2005. In 2006, the I Marine Expeditionary Force replaced the II Marine Expeditionary Force in Iraq. Both Marine Expeditionary Forces supported the same security mission and needed the same nonlethal laser dazzler capability.

## What We Found

We did not find any evidence of criminal negligence in Marine Corps processing of the July 2005 laser dazzler urgent request. However, Marine Corps Combat Development Command did not respond to the II Marine Expeditionary Force (Forward) urgent request for a nonlethal laser dazzler capability in a timely manner. Marine Corps officials took 15 months to process this urgent request that could have been fulfilled 6 months earlier had Marine Corps leadership at two commands exercised sufficient oversight and effectively monitored the progress of the urgent request. Nearly 4 months elapsed because Marine Corps Combat Development Command entertained the I Marine Expeditionary Force (Forward) insistence for an unapproved laser dazzler solution rather than pursue a viable Laser Safety Review Board approved solution. An additional 2 months elapsed because the administrative processing of the urgent request lagged. As a result, Marines deployed to Iraq in 2006 were left without a nonlethal laser dazzler capability. Further, after the approved lasers were procured, the I Marine Expeditionary Force (Forward) purchased 28 unapproved lasers costing \$323,324, which were not fielded in Iraq.

## Management Actions Taken

The Marine Corps issued Marine Corps Order 3900.17 in October 2008 to improve the processing of urgent requests and track their status. To accomplish this goal, the Marine Corps Combat Development Command created the Web-based Virtual Urgent Universal Need Statement system, which provides users with visibility of the review chain and status for urgent requests. The establishment of this Web-based system should improve the efficiency of the urgent needs process.

## What We Recommend

We recommend that the Commandant of the Marine Corps perform a review of the circumstances that led to the purchase of the 28 unapproved lasers and, if appropriate, initiate administrative action.

## Management Comments and Our Response

The Deputy Commandant for Combat Development and Integration agreed with the recommendation. The Marine Corps comments were responsive, and the actions met the intent of the recommendation. However, Marine Corps comments disagreed that Marine Corps Combat Development Command did not respond timely to the urgent request. Although not required to comment, the Assistant Secretary of the Navy (Research, Development and Acquisition) agreed with the recommendation. See the recommendation table on the back of this page.

**Figure. Green Beam Designator-III Custom Nonlethal Warning Laser**



Source: B.E. Meyers

## Recommendation Table

<b>Management</b>	<b>Recommendation Requiring Comment</b>	<b>No Additional Comments Required</b>
Commandant of the Marine Corps		1

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# Introduction

## Objective

The objective of the audit was to determine whether Marine Corps managers effectively responded to the urgent request of deployed Marines to acquire a nonlethal laser dazzler capability in accordance with Federal and Defense acquisition regulations. See Appendix A for a discussion of the scope and methodology.

## Background

This is the second audit we initiated in response to a request from the Assistant Commandant of the Marine Corps. Specifically, the Assistant Commandant stated that:

allegations surfaced that the Marine Corps had not acted with alacrity in responding to the needs of deployed units, and specifically that mismanagement on the part of the Marine officials cost Marine lives by not acquiring Mine Resistant Ambush Protected (MRAP) vehicles or laser dazzlers in a timely fashion.

The Assistant Commandant's request also referenced allegations that criminal negligence occurred. We did not find any evidence of criminal negligence in Marine Corps processing of the July 2005 laser dazzler urgent universal need statement.

The Office of Inspector General issued Report No. D-2009-030, "Marine Corps Implementation of the Urgent Universal Needs Process for Mine Resistant Ambush Protected Vehicles," December 8, 2008, in its first response to the request.

### ***Mission of Marine Expeditionary Forces in Iraq***

The Marine Expeditionary Forces (MEFs) provided air, ground, and logistics support to the United States Central Command as the Multi-National Force-West (MNF-W). MNF-W supported the Iraqi civil authorities and security forces securing the MNF-W area of operations, primarily the Al Anbar province, which includes the cities of Fallujah, Ar Ramadi, Al Qaim, and Haditha. When deployed as the lead element, the MEF is designated as MEF (Forward). The I MEF and II MEF rotated forward deployments annually to serve the same mission of commanding the MNF-W.

<b><u>Multi-National Force-West</u></b>	<b><u>Period of Forward Deployment to Iraq</u></b>
I MEF (Forward)	March 2004–February 2005
II MEF (Forward)	March 2005–February 2006
I MEF (Forward)	March 2006–February 2007
II MEF (Forward)	March 2007–February 2008

## ***Inadequate Security Measures Available for Deployed Marines***

In June 2005, the Commanding General, II MEF (Forward), acknowledged that Marine operating forces experienced an increase in lethal encounters and casualties while securing checkpoints, entry control points, convoys, and perimeter positions in Iraq. Both I MEF and II MEF supported this security mission when forward and relied on flares and smoke signals to send warnings to civilians approaching Marine positions. These methods were not always effective, and the Marines needed a nonlethal capability to aid them in their security mission. Laser dazzlers provide a nonlethal capability by emitting an intense light capable of temporarily obscuring the vision of approaching individuals; however, using lasers poses a risk of serious eye injury and permanent blindness. This mode of employing a laser, shining a laser directly into the face or eyes, increases the inherent dangers of using the laser. Using nonlethal laser dazzlers would give Marine operating forces an additional capability to increase stand-off distances, safeguard civilians who venture too close to Marine positions, and help prevent unwarranted escalation of force incidences; however, DoD policy prohibits the use of lasers designed to cause permanent blindness. Operating procedures and laser safety measures are essential to ensure the safe and proper use of the lasers.

## ***Laser Dazzler Capability Needed***

The Commanding General, II MEF (Forward), submitted an urgent universal need statement for a nonlethal laser dazzler capability on June 9, 2005.<sup>1</sup> This urgent universal need statement initiated an urgent request that, if not filled, would increase the risk of unwarranted escalation of force incidents and the difficulty of safeguarding the lives of civilians. The Marine Forces Central Command approved the urgent request on July 27, 2005. The Marine Forces Central Command identified the laser dazzler urgent request as a level two priority because higher priority was placed on requests for countermine improvised explosive devices; force protection; command, control, and communication; surveillance; and language translation. The urgent request specifically identified the Compact High Power Laser Dazzler (CHPLD) as a materiel solution. However, the urgent request did not identify specific performance requirements in operationally relevant and measurable terms, so Marine Corps Combat Development Command (MCCDC) in conjunction with the II MEF (Forward) defined the following performance parameters.

- The laser dazzler should provide a capability that temporarily obscures the vision during:
  - nighttime operations at a minimum of 250 meters (about 820 feet) (threshold) with a desired range of 300 meters (about 984 feet) (objective) and
  - daytime operations at a minimum of 100 meters (about 328 feet) (threshold) with a desired range of 150 meters (about 492 feet) (objective).
- The laser dazzler should attach to Marine Corps rifles, light machine guns, vehicles, or acoustic hailing devices to be seamless with the use of lethal force.

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<sup>1</sup> Marine Corps Combat Development Command is transitioning the laser dazzler capability to a program of record. See Appendix B for the status of the laser dazzler capability transition.

## ***Established Urgent Needs Process***

The Marine Corps established an urgent needs process to enable deployed commanders to request critical equipment that is needed by operating forces conducting combat or contingency operations. Marine operating forces deployed or preparing to deploy use urgent universal need statements to identify and submit their urgent requests to MCCDC, which should promptly identify a proposed solution to fulfill the urgent request. In instances of nonlethal weapons and lasers, additional approvals are needed. Legal and treaty reviews are needed to ensure that the proposed solution and concept of employment meets statutory laws and treaties. The Navy Laser Safety Review Board (LSRB) evaluates the potential hazards of using the laser and renders an opinion on its safety and use. After MCCDC identifies a materiel solution that meets legal and safety requirements, the Chairman, Capabilities Development and Integration Board<sup>2</sup> (CDIB), reviews the proposed solution and recommends whether it is a viable option to the Deputy Commandant for Combat Development and Integration.<sup>3</sup> Once a determination is made, the Marine Corps Requirements Oversight Council (MROC) reviews and approves a solution and concept of employment to fulfill the urgent request. The Marine Corps updated the urgent needs process in 2008. See Appendix C for guidance on the urgent needs process and nonlethal lasers.

## **Review of Internal Controls**

DoD Instruction 5010.40, “Managers’ Internal Control Program (MICP) Procedures,” July 29, 2010, requires DoD organizations to implement a system of internal controls that provides reasonable assurance about the effectiveness of the controls. We identified an internal control weakness in the Marine Corps response to the July 2005 urgent request for a nonlethal laser dazzler capability. We determined that MCCDC did not respond to the II MEF (Forward) urgent request for a nonlethal laser dazzler capability in a timely manner. MCCDC allowed the I MEF (Forward) insistence for an unapproved laser dazzler and an ineffective administrative processing to delay the fielding of the laser dazzler capability. This delay left Marines deployed to Iraq in 2006 without critical equipment for more than half of their forward deployment. Although we identified the internal control weakness, recommendations in prior reports and Marine Corps issuance and implementation of Marine Corps Order (MCO) 3900.17, “The Marine Corps Urgent Needs Process (UNP) and the Urgent Universal Need Statement (Urgent UNS),” October 7, 2008, should correct the problem by improving the urgent needs process. MCCDC also established a virtual tracking system that provides visibility over urgent requests for all parties and help prevent future delays in fielding other critical equipment. We will provide a copy of the final report to senior officials responsible for internal controls at MCCDC and the United States Marine Forces Central Command.

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<sup>2</sup> The CDIB is composed of subject matter experts who convene to recommend a course of action based on the assessment of the Doctrine, Organization, Training, Materiel, Leadership and Education, and People and Facilities spectrum.

<sup>3</sup> The Deputy Commandant for Combat Development and Integration is also the Commanding General, Marine Corps Combat Development Command.

## **Finding. Delayed Fulfillment of Nonlethal Laser Dazzler Capability**

MCCDC did not respond to the II MEF (Forward) urgent request for a nonlethal laser dazzler capability in a timely manner. Providing the deployed Marines with this capability would allow them to more effectively secure checkpoints and convoys in Iraq by temporarily obscuring the vision of approaching individuals to deter them from getting too close and triggering an unnecessary escalation of force incident. However, extreme care must be taken in employing lasers to prevent serious eye injury and permanent blindness. The Marine Corps took 15 months to process this urgent request for a nonlethal laser dazzler capability that could have been fulfilled 6 months earlier had Marine Corps leadership at two commands exercised sufficient oversight and effectively monitored the progress of the urgent request. Nearly 4 months elapsed because MCCDC entertained the I MEF (Forward) insistence for an unapproved laser dazzler solution rather than pursue a viable Laser Safety Review Board approved solution. An additional 2 months elapsed because the administrative processing of the urgent request lagged. As a result, the Marines deployed to Iraq in 2006 were unnecessarily left without a nonlethal laser dazzler capability. Further, after the approved lasers were procured, the I MEF (Forward) purchased 28 unapproved lasers, costing \$323,324, which were not fielded in Iraq.

### **Untimely Response to the Urgent Request**

MCCDC did not respond to the II MEF (Forward) urgent request for a nonlethal laser dazzler capability in a timely manner. The II MEF (Forward) submitted an urgent request, June 9, 2005, 4 months after the II MEF rotated to Iraq because they experienced an increase in lethal encounters and casualties while securing checkpoints, entry control points, convoys, and perimeter security positions. However, at the end of the II MEF's rotation, 8 months later, the deployed Marines still did not have a nonlethal laser dazzler capability. Fifteen months elapsed from the date MCCDC received the urgent request to the date the Marine Corps Systems Command (MARCORSYSCOM) awarded a contract to procure 400 laser dazzlers. MCCDC could have shortened the urgent needs process by 6 months had Marine Corps leadership exercised sufficient oversight and effectively monitored the progress of the urgent request.

On initial receipt of the urgent request in July 2005, MCCDC responded promptly. MCCDC worked closely with the Joint Non-Lethal Weapons Directorate to identify a potential materiel solution. The Joint Non-Lethal Weapons Directorate identified four lasers for the Air Force Research Laboratory to evaluate. The four lasers evaluated were CHPLD, Green Beam Designator-III Custom (GBD-IIIC), and Xtreme Alternative Defense Systems Photonic Disruptor/Green models 105 and 200. The Air Force Research Laboratory test results indicated that both the CHPLD and the GBD-IIIC laser met or exceeded the performance parameters specified by the II MEF (Forward). In addition, MARCORSYSCOM considered additional factors such as cost, ruggedization,<sup>4</sup> production

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<sup>4</sup> Ruggedization is the act of making a piece of equipment durable in a military environment.

capability, and battery type to rank the possible laser dazzler solutions. The Commander, MARCORSYSCOM, presented both lasers, CHPLD and GBD-IIIC laser, as possible alternatives to the Commanding General, II MEF (Forward), but considered the GBD-IIIC laser a more viable option. The Commanding General, II MEF (Forward), accepted the GBD-IIIC laser option.

MCCDC and MARCORSYSCOM then sought the nonlethal systems and laser weapons reviews for the GBD-IIIC laser, to ensure that the proposed solution and concept of employment met the statutory laws and treaties. These reviews helped to ensure that the Marines would employ the laser dazzler in a way that did not cause serious eye injury or permanent blindness:

- Naval Surface Warfare Center – Dahlgren Division (Dahlgren) evaluated the GBD-IIIC laser for safety and radiation hazard. Dahlgren also evaluated the GBD-IIIC laser for compliance with Navy and Marine Corps laser policy.
- Naval Judge Advocate General determined that the GBD-IIIC laser complied with treaty obligations, Federal laws, and international laws of armed conflicts.
- The Director, Naval Treaty Implementation Program, determined that the GBD-IIIC laser complied with arms control treaties and international agreements.
- The Chairman, Navy LSRB, temporarily approved the safety and use of the GBD-IIIC laser.

By the end of February 2006, MCCDC and MARCORSYSCOM had obtained the additional legal and safety reviews and approvals needed for the GBD-IIIC laser solution. Simultaneously, the I MEF was rotating forward and replacing the II MEF in Iraq.

With the rotation of MEFs, progress stalled in fulfilling the urgent request for laser dazzlers. MCCDC did not follow the urgent needs process outlined by the Marine Administrative Message (MARADMIN) 424/04, “OIF III Urgent Universal Need Statement (UNS) Process,” September 28, 2004. MARADMIN states once MCCDC identifies a proposed

*With the rotation of MEFs, progress stalled in fulfilling the urgent request for laser dazzlers.*

solution, the Chairman, CDIB, should immediately review the proposed solution to determine whether it is a viable option and ready for MROC approval. Instead, the Chairman, CDIB, deferred the processing of the urgent request and directed

MCCDC’s Non-Lethal Weapons Branch to seek I MEF (Forward) agreement of the GBD-IIIC laser solution because the I MEF (Forward) replaced the II MEF (Forward). However, after 4 months of deliberation, the I MEF (Forward) did not agree with MCCDC on the laser solution. According to the former Chief of Staff, I MEF (Forward), the Commanding General, MCCDC, visited the I MEF (Forward) and learned of the status of unfulfilled urgent requirements in the summer of 2006. The former Chief of Staff also stated that after the visit by the Commanding General, MCCDC, solutions to urgent requirements began to be fielded to theater. On June 29, 2006, the CDIB resumed processing the GBD-IIIC laser as the solution to the urgent request. An additional 2 months elapsed for the

administrative processing of the urgent request, through the CDIB and the Office of Deputy Commandant for Combat Development and Integration, before MROC approval was sought.

## **Improvement Needed in the Oversight of the Urgent Needs Process**

Leadership at MCCDC and I MEF (Forward) did not provide sufficient oversight or effectively monitor the progress of the laser dazzler urgent request. MCCDC and the I MEF (Forward) wasted nearly 4 months disagreeing on the laser dazzler solution. An additional 2 months elapsed because MCCDC lacked efficiency in the administrative processing of the urgent request for a nonlethal laser dazzler capability. This breakdown left Marine units without critical equipment needed to support the security mission. See Appendix D for a timeline of events identifying the period of delay in the urgent needs process.

### ***Disagreement Between MCCDC and I MEF (Forward)***

I MEF (Forward) and MCCDC disagreed about the proposed viable solution for the nonlethal laser dazzler capability, and a communication breakdown between the commands caused an impasse. Even though the GBD-IIIC laser met the threshold level performance requirements, satisfied the legal and treaty reviews, and received an LSRB recommendation, I MEF (Forward) wanted the CHPLD laser even if fielding the capability would be delayed. The former Deputy Commandant for Combat Development and Integration and the former Commanding General, I MEF (Forward), allowed their staff to disagree over the proposed viable solution and did not get involved when an agreement was not reached.

MCCDC's Non-Lethal Weapons Branch and I MEF's (Forward) Science, Technology, and Innovation Division (G-9) deliberated 4 months about accepting the GBD-IIIC laser without resolution. In an attempt to resolve the conflict, on June 12, 2006, MCCDC and MARCORSYSCOM sent a coordinated Naval message requesting I MEF (Forward) to make a final decision on the GBD-IIIC laser suitability and indicated that changing the proposed solution would delay fielding even longer. The I MEF (Forward) Assistant Chief of Staff for G-9 responded that the I MEF (Forward) did not want the GBD-IIIC laser. The I MEF (Forward) wanted the CHPLD. By the end of June 2006, MCCDC and the I MEF (Forward) still had not reached an agreement.

The former Deputy Commanding General, I MEF (Forward), stated that he was aware of the disagreement and he had discussed the disagreement with the former Commanding General. According to the former Deputy Commanding General, he did not have a preferred laser solution; however, the Assistant Chief of Staff, G-9, preferred the CHPLD. The former Deputy Commanding General supported G-9's preference and allowed discussion with MCCDC to continue. The former Deputy Commanding General stated that, in hindsight, he should have intervened to resolve the disagreement.

## ***Administrative Delays***

An additional 2 months elapsed because MCCDC lacked efficiency in the administrative processing of the urgent request for a nonlethal laser dazzler capability. The timeline for the final processing was as follows:

- 14 days elapsed to document the CDIB Chairman decision to recommend the GBD-IIIC laser to the Deputy Commandant for Combat Development and Integration;
- 21 days elapsed for the Deputy Commandant to approve the GBD-IIIC laser as the course of action; and
- 32 days elapsed for the Deputy Commandant to prepare a briefing package needed<sup>5</sup> for MROC approval.

Concurrently, MCCDC accommodated the I MEF (Forward) preference and began obtaining the additional testing needed for the Navy LSRB approval of the CHPLD. However, the CHPLD did not pass the Dahlgren laser hazard evaluation, and the Navy LSRB did not approve the safety and use of the CHPLD.

## **Marines Left Without a Laser Dazzler for 6 Months**

Marines deployed to Iraq in 2006 were left without a laser dazzler capability for 6 months. The I MEF (Forward) continued to depend on smoke signals and flares to secure checkpoints, entry control points, convoys, and perimeter positions but still needed a nonlethal laser capability to aid them in their security mission. The lack of a nonlethal laser dazzler capability increased the risk of unwarranted escalation of force incidents and the difficulty of safeguarding civilians when the approaching vehicles were moving too fast or too close to Marine positions without noticing the warning signs.

## **Contracts Awarded for Laser Dazzlers**

Once the MROC approved the GBD-IIIC laser solution on September 15, 2006, the Deputy Commandant for Combat Development and Integration immediately issued a statement of need to the MARCORSYSCOM documenting the MROC approval and funding authorization for the purchase of 400 GBD-IIIC lasers. The MARCORSYSCOM expeditiously awarded a contract to B.E. Meyers for 400 GBD-IIIC lasers 43 days later, on November 1, 2006.

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<sup>5</sup> MCCDC had to submit the briefing package three times to the MROC before the briefing package was accepted. The first package submitted did not include available funding for procuring the GBD-IIIC laser. The second package submitted contained extraneous information that the MROC Secretariat wanted removed. The MROC accepted the third package submitted.

### ***Purchase of the 28 CHPLDs by I MEF (Forward)***

Nine days after MARCORSSYSCOM awarded the contract for 400 GBD-IIIC lasers, I MEF (Forward) purchased 28 CHPLDs from Genesisone General Trading and Supplies, Safat, Kuwait, for \$323,324. The former Chief of Staff, I MEF (Forward), stated that he was

*Nine days after  
MARCORSYSCOM awarded  
the contract for 400 GBD-IIIC  
lasers, I MEF (Forward)  
purchased 28 CHPLDs.*

unaware that MARCORSSYSCOM had purchased the GBD-IIIC lasers. He also stated that he was aware that a year had passed and the operating forces were still without a laser dazzler capability. According to the Deputy Commanding General, I MEF (Forward), the Commanding General authorized the purchase of the 28 CHPLDs to test them in one of Iraq's

high-threat areas. A contracting officer with the Joint Contracting Command-Iraq/Afghanistan awarded the contract on November 10, 2006. I MEF (Forward) did not obtain permission or approval from MCCDC, MARCORSSYSCOM, or the MROC before purchasing the CHPLDs. Moreover, the LSRB had not approved the CHPLD for safety and use.

The I MEF (Forward) did not follow the urgent needs process when purchasing the CHPLDs. The I MEF (Forward) should have followed the urgent needs process to ensure that the Marines would receive a viable solution that fulfilled the capability needed and met all the legal and safety requirements. The former Deputy Commanding General, I MEF (Forward), stated that I MEF (Forward) purchased 28 CHPLDs because MCCDC took too long to fulfill the urgent request and believed that the CHPLD was a better and less expensive laser. In December 2006, the Commander of United State Marine Forces Central Command put an immediate halt on the use of the CHPLD because Navy LSRB had not provided a positive safety recommendation for these lasers. Because the I MEF (Forward) acquired the CHPLDs without obtaining the necessary legal and safety approvals, the Commandant of the Marine Corps should review the circumstances that led to the purchase of the 28 CHPLDs and, if appropriate, initiate administrative action.

According to the former Deputy Commanding General, the I MEF (Forward) never fielded the 28 CHPLDs. The MARCORSSYSCOM Program Manager, Optics and Nonlethal Systems Infantry Weapons System, evaluated the 28 CHPLDs in June 2009 and reported that the 28 CHPLDs showed no discernable sign of wear and tear from use in operational theater. Also, the program manager identified multiple manufacturing defects with the CHPLD. The report concluded that 9 of the 28 CHPLDs were not operable and removal of the battery was difficult. In addition, 16 of the 28 CHPLDs did not have appropriate hazard distance labels in accordance with Navy and Marine laser safety requirements. Engineers from the DoD Office of Inspector General confirmed the program manager's findings in their August 2009 evaluation.



## **Management Actions Taken to Improve Process**

The Marine Corps issued MCO 3900.17 in October 2008 to improve the urgent needs process. The order requires the Deputy Commandant for Combat Development and Integration to maintain a system for processing and tracking urgent requests. The MCCDC developed the Web-based Virtual Urgent Universal Need Statement system to provide visibility of the review chain<sup>6</sup> and status for urgent requests. The Web-based system allows commands the visibility to follow the status of their urgent request and notifies users when the request has been updated. MCCDC issued a MARADMIN in February 2009 notifying Marine Corps Total Force of the improved urgent needs process.

## **Conclusion**

MCCDC did not respond to the II MEF (Forward) urgent request for a nonlethal laser dazzler capability in a timely manner. MCCDC allowed I MEF (Forward) insistence for an unapproved laser dazzler and inefficient administrative processing to cause unnecessary delays. These delays left the Marines deployed to Iraq in 2006 without a critical nonlethal weapon to more effectively perform security missions for nearly 6 months. The Chairman, CDIB, should not have delayed the processing of the GBD-IIIC laser dazzler to seek agreement from I MEF (Forward). Once the Navy LSRB approved the safety and use of the GBD-IIIC laser, the CDIB should have immediately evaluated whether the GBD-IIIC laser met the requirements of the urgent request, immediately obtained the approval of the Deputy Commandant for Combat Development and Integration, and forwarded it to the MROC for its review and approval. However, Marine Corps issuance of MCO 3900.17 and the establishment of the Virtual Urgent Universal Need Statement system should improve the efficiencies of the urgent needs process. In addition, the I MEF (Forward) should not have purchased the 28 CHPLDs without obtaining the legal and safety approvals needed for nonlethal lasers.

## **Management Comments on the Finding and Our Response**

### ***Management Comments***

The Deputy Commandant for Combat Development and Integration responded for the Commandant of the Marine Corps. The Deputy Commandant disagreed with the finding that MCCDC did not respond in a timely manner to the urgent request for a nonlethal laser dazzler. He considered both MCCDC and MARCORSSYSCOM responses prompt and appropriate. The Deputy Commandant justified the extended response time as necessary because providing a laser that complied with DoD laser policy and Laws of Armed Conflict and responding to two different Commanding Generals, commanding different missions and wanting different laser solutions, were challenging. He indicated that MCCDC could have provided the I MEF (Forward) with a laser that complied with Laws of Armed Conflict and the DoD laser directives, but the Commanding General I MEF (Forward) and Deputy Commanding General I MEF (Forward) rejected it. The

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<sup>6</sup> The review chain may include the Marine Forces Commands, MCCDC, CDIB, and MARCORSSYSCOM.

Deputy Commandant stated that the I MEF (Forward) Commanding General requested a laser that MCCDC could not legally deliver. The Deputy Commandant stated that MCCDC worked diligently to minimize any delays and field an approved laser that the I MEF (Forward) would use. The Deputy Commandant stated that the former Commanding General, MCCDC, decided to fulfill the urgent request with the approved laser despite I MEF (Forward) having rejected it because the laser could be rapidly acquired and safely employed. The Deputy Commandant added that MCCDC accepted the risk that Marines may not use the laser.

### ***Our Response***

We recognize MCCDC's challenges fulfilling the laser dazzler request. Specifically, we acknowledge that fulfilling the laser dazzler urgent request required legal and safety approval. Additionally, we recognize that different Commanding Generals wanted different laser solutions and that MCCDC initially responded promptly to the urgent request. However, delays occurred after MCCDC obtained the legal and safety approvals to field the laser. The several months of deliberation between MCCDC and I MEF (Forward) was not a prudent use of time.

The decision to delay for 4 months the processing of the laser dazzler requirement was unnecessary. Little changed in the 4 months that MCCDC took to decide whether to field the only laser that complied with the safety and legal requirements. MCCDC and the I MEF (Forward) Commanding Generals still did not reach an agreement on a laser solution. The concept of employment for using the laser to support combat missions did not change. Additional legal and safety approvals were not obtained. Further, MCCDC contracted for the same laser in November 2006 that was available in February 2006. MCCDC should have responded promptly with the laser solution that the Deputy Commandant described could be "rapidly acquired and safely employed."

### **Recommendation, Management Comments, and Our Response**

**1. We recommend that the Commandant of the Marine Corps perform a review of the circumstances that led to the purchase of the 28 Compact High Power Laser Dazzlers and, if appropriate, initiate administrative action.**

#### ***Marine Corps Comments***

The Deputy Commandant for Combat Development and Integration responded for the Commandant of the Marine Corps. The Deputy Commandant agreed with the recommendation and stated that the Marine Corps will review the circumstances relating to the purchase of the 28 Compact High Power Laser Dazzlers. The Marine Corps plans to provide a status report of action taken to implement the recommendation by March 2, 2011.

#### ***Our Response***

The Deputy Commandant for Combat Development and Integration comments are responsive, and the actions meet the intent of the recommendation.

***Department of the Navy Comments***

Although not required to comment, the Assistant Secretary of the Navy (Research, Development and Acquisition) agreed with the recommendation.

## **Appendix A. Scope and Methodology**

This is the second audit initiated in response to the Assistant Commandant of the Marine Corps February 2008 request. We initiated the first audit in March 2008 and issued DoD IG Report No. D-2009-030, "Marine Corps Implementation of the Urgent Universal Needs Process for Mine Resistant Ambush Protected Vehicles," December 8, 2008.

We conducted this performance audit from April 2009 through January 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We collected, reviewed, and analyzed documents dated from July 1996 through September 2009. We reviewed MARADMINs and MCOs to help identify the urgent needs process. We also reviewed Air Force Research Laboratory testing results, concept of employment, Dahlgren testing results, and legal and treaty reviews to determine whether MCCDC and MARCORSYSCOM had the required testing and legal reviews completed for the nonlethal weapons process. Additionally, we reviewed the urgent request, CDIB memoranda, the MROC Decision Memorandum, and the Urgent Statement of Need to determine whether MCCDC and MARCORSYSCOM correctly followed the urgent needs process. Also, we reviewed the contract file as well as e-mail communications among MCCDC, Joint Non-Lethal Weapons Directorate, MARCORSYSCOM, II MEF (Forward), and I MEF (Forward) from August 2005 to June 2007 relating to the selection of a laser dazzler.

We conducted interviews with DoD officers and civilians from the following Marine forces, commands, and councils to understand the urgent needs process: I MEF (Forward), II MEF (Forward), MCCDC, MARCOPRSYSCOM and MROC. We also conducted interviews of Dahlgren, Air Force Research Laboratory, Joint Non-Lethal Weapons Directorate, and LSRB personnel to help identify whether the laser dazzler systems were adequately tested and evaluated in accordance with policy. Additionally, we interviewed staff from the contractors LE Systems and B.E. Meyers that provided the proposed system solution to the laser dazzler urgent request.

### **Use of Computer-Processed Data**

We did not use computer-processed data to perform this audit.

### **Use of Technical Assistance**

The DoD IG Technical Assessment Directorate assisted with the audit to determine the adequacy of testing performed on the GBD-IIIC laser and CHPLD. The Technical Assessment Directorate engineers interviewed personnel and reviewed documents obtained from Joint Non-Lethal Weapons Directorate, Dahlgren, Air Force Research Laboratory, and

contractors. In addition, the Technical Assessment Directorate engineers evaluated the 28 CHPLDs purchased by the I MEF (Forward).

## **Prior Coverage**

During the last 5 years, the Government Accountability Office, the Department of Defense IG, and the Navy Audit Service have issued two reports discussing the Urgent Universal Need Statement process and one report discussing nonlethal weapons. Unrestricted Government Accountability Office reports can be accessed over the Internet at <http://www.gao.gov>. Unrestricted DoD IG reports can be accessed at <http://www.dodig.mil/audit/reports>. Unrestricted Navy Audit Service reports can be accessed at <http://www.hq.navy.mil/NavalAudit>.

### **GAO**

GAO Report No. GAO-09-344, “DoD Needs to Improve Program Management, Policy, and Testing to Enhance Ability to Field Operationally Useful Non-Lethal Weapons,” April 21, 2009

### **DoD IG**

DoD IG Report No. D-2009-030, “Marine Corps Implementation of the Urgent Universal Needs Process for Mine Resistant Ambush Protected Vehicles,” December 8, 2008

### **Navy**

Navy Audit Service Report No. N2007-0060, “Marine Corps Urgent Universal Need Statement Process,” September 28, 2007

## Appendix B. Laser Dazzler Capability Transition to a Program of Record

The Marine forces still need the laser dazzler capability; however, safe use of the laser is still a concern. Marine Corps managers are pursuing a safer laser dazzler capability through a program of record. The initial GBD-IIIC laser was an inherently dangerous system for its intended use and relies heavily on procedural controls, vice design controls. See Figure B-1 for a picture of the GBD-IIIC laser.

**Figure B-1. GBD-IIIC Nonlethal Warning Laser**



Source: B.E. Meyers

Marine Corps acquisition managers identified a temporary solution to make the GBD-IIIC laser safer by adding a safety control module such as a range finder that is designed to shut off the dazzling beam when an object enters the hazard area. The GBD-IIIC laser with the attached safety control module is known as the LA-9/P Visual Disruption Laser. See Figure B-2 for a picture of the GBD-IIIC laser with the safety control module.

**Figure B-2. LA-9/P Visual Disruption Laser**



Source: B.E. Meyers

Marine Corps managers are developing an ocular interruption device to replace the GBD-IIIC laser with attached safety control module or LA-9/P Visual Disruption Laser. The ocular interruption device will be “eye-safe” delivering a nonlethal effect without requiring the synchronization of interdependent systems. Marine Corps developed an Analysis of Alternatives and a Capability Development Document for the ocular interruption device. According to MCCDC personnel, the ocular interruption initiative should transition to the Engineering and Manufacturing Development Phase of the DoD acquisition life-cycle process in 2012.

# Appendix C. Guidance on the Urgent Needs Process and Nonlethal Lasers

## Marine Corps Urgent Needs Policy

The Marine Corps urgent needs process enables deployed commanders to request equipment critical to the mission and needed by operation forces conducting combat or contingency operations. Through the urgent needs process, the Marine Corps is able to procure equipment faster than through the Defense acquisition process. The Marine Corps issued policy in 2002 establishing the urgent needs process.

### ***Marine Corps Expeditionary Force Development System***

MCO 3900.15A, “Marine Corps Expeditionary Force Development System,” November 26, 2002, establishes the Expeditionary Force Development System and provides guidance for developing future warfighting capabilities needed to meet Marine forces mission objectives. On March 10, 2008, the Marine Corps updated its Expeditionary Force Development System policy with MCO 3900.15B, “Marine Corps Expeditionary Force Development System.”

### ***Marine Administrative Messages***

To support contingency operations, the Marine Corps issued MARADMINs that established guidance for submitting and processing urgent requirements. MARADMINs issued from October 2002 to January 2006<sup>1</sup> accelerated the standard process to fulfill capability gaps through the Expeditionary Force Development System and submission of universal need statements by establishing the urgent universal need statement process.

An urgent universal need statement is designed to provide deployed or preparing-to-deploy Marines a tool to request capabilities that, if not fulfilled, place the accomplishment of a mission in jeopardy or increase the risk of casualties. The intent of an urgent universal need statement was not to field a capability to the entire Marine Corps, but to meet the immediate operational needs of units deployed or preparing to deploy. The guidance instructed Marines to submit an urgent universal need statement describing the nature of the need, how it was identified, and why the need had to be fulfilled in the time frame selected. The guidance also instructed Marines on how to submit the urgent need request through their chain of command and instructed MCCDC to conduct an immediate assessment to determine a solution to fulfill the request and obtain MROC approval for the solution.

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<sup>1</sup> These Marine Administrative Messages are MARADMIN 550/02, “Urgent USMC Requirements Generation Process for Operation Enduring Freedom,” October 6, 2002; MARADMIN 533/03, “OIF II Urgent Universal Need Statement (UNS) Process,” November 21, 2003; MARADMIN 424/04, “OIF III Urgent Universal Need Statement (UUNS) Process,” September 28, 2004; and MARADMIN 045/06, “Urgent Universal Need Statement (UUNS) Process,” January 26, 2006.



## ***Marine Corps Urgent Needs Process and the Urgent Universal Need Statement***

The Marine Corps issued MCO 3900.17, “The Marine Corps Urgent Needs Process (UNP) and the Urgent Universal Need Statement (Urgent UNS),” October 7, 2008, cancelling the MARADMINs. This MCO defined the Marine Corps urgent needs process and refined the guidance for the submission and processing of universal need statements. The updated guidance established the use of the web-based Virtual Urgent Universal Need Statement system to improve the timeliness in which urgent needs are addressed and the visibility and collaboration in the process by senior leaders. Among these leaders are the Deputy Commandant for Combat Development and Integration, MARCORSYSCOM, Chairman of the CDIB, and the supported Commander Marine Forces.

## **Nonlethal Weapons and Laser Policy**

In addition to the urgent needs process guidance, additional policy compliance is required for acquiring and fielding nonlethal lasers. A memorandum issued by the Secretary of Defense in 1997 and a Department of Defense Directive issued in 1996 provide policy on the use of lasers and non-lethal weapons by the Department of Defense. The Chief of Naval Operations, the Marine Corps, Code of Federal Regulations (CFR), and American National Standards Institute (ANSI) issued instructions, orders, regulations, and standards related to the development, acquisition, testing, and use of nonlethal lasers.

### ***DoD Policy on Use of Blinding Lasers***

The Secretary of Defense issued policy on the use of blinding lasers on January 7, 1997. The policy prohibited the use, in the DoD, of lasers designed to cause permanent blindness. However, the policy acknowledged the benefits that lasers provide to military operations, such as targeting, range-finding, and reducing collateral damage to civilian lives. The policy also recognized that accidental eye injuries may occur with the use of lasers not designed to cause permanent blindness. As a consequence, the policy states that the DoD will strive to minimize these types of injuries through training and doctrine, when using lasers not specifically designed to cause permanent blindness.

### ***Policy for Nonlethal Weapons***

The DoD Directive 3000.3, “Policy for Non-Lethal Weapons,” July 9, 1996, allowed the DoD to design nonlethal weapons to reinforce deterrence and expand the range of options available to commanders. The policy allows U.S. Forces to use nonlethal weapons to:

- discourage, prevent, or delay hostile environments;
- limit escalation of force incidents;
- take military action in situations where use of lethal force is not the preferred option; and
- better protect our forces.

The policy also required the Secretaries of Military Departments to ensure that a legal review for the acquisition of all nonlethal weapons is conducted to ensure that the U.S. Government is complying with applicable treaties, international laws, and laws of war.

### ***Navy Laser Hazard Control Program***

The Office of the Chief of Naval Operations Instruction 5100.27A/MCO 5104.1B, “Navy Laser Hazards Control Program,” September 24, 2002, requires the identification and control of laser radiation hazards and applies to the design, use, and disposal of all equipment and systems capable of producing laser radiation.<sup>2</sup> The Instruction and Order require commanders of all systems commands and all Navy and Marine Corps program directors and project managers to:

- review the purpose of proposed lasers to determine whether they must be deemed as military-exempt lasers;<sup>3</sup>
- grant exemptions for meeting title 21 CFR Part 1040, “Performance Standards for Light-Emitting Productions”;<sup>4</sup>
- ensure that Navy Laser Safety Review Board (LSRB) reviews all classes of lasers used for combat; and
- ensure that Dahlgren reviews the laser and measures the nominal ocular hazard distance and other safety parameters of all lasers prior to the LSRB review.

### ***Use and Acquisition of Nonlethal Weapons***

MCO 3430.7, “Marines Corps Program for the Use and Acquisition of Non-Lethal Weapons,” July 31, 1997, establishes procedures for the request, approval, and employment of nonlethal weapons used in contingency operations and armed conflict. The MCO states:

- Commanders should submit the request for nonlethal weapons to the Commanding General, MCCDC;
- Commanding General, MCCDC, should coordinate the request with the Commandant of the Marine Corps and Operational Law Branch to ensure that the request complies with established policy and legal requirements; and
- Commanding General, MCCDC, should coordinate with the Commander, MARCORSYSCOM, to initiate the acquisition process.

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<sup>2</sup> The updated policy, Chief of Naval Operations Instruction 5100.27B/MCO 5104.1C, “Navy Laser Hazards Control Program,” May 2, 2008, also requires the identification and control of laser radiation hazards and applies to the design, use, and disposal of all equipment and systems capable of producing laser radiation.

<sup>3</sup> A Military-exempt laser is a laser designed for actual combat, combat training operations, or classified in the interest of national security. When a laser meets these criteria, the laser may be exempted from complying with 21 CFR 1040 and must comply instead with DoD laser safety design requirements. In the case of the Navy, Military-exempt lasers must comply with the laser safety design requirements in Chief of Naval Operations Instruction 5100.27A/MCO 5104.1B.

<sup>4</sup> Title 21 CFR 1040 requires laser products to incorporate certain safety features, which may include warning lights, warning labels, and housing interlocks.

### ***Performance Standards for Light-Emitting Products***












Title 21, CFR, section 1040, “Performance Standards for Light-Emitting Products,” (2005) (21 CFR 1040) requires that all laser products, regardless of their class, should have at least one safety interlock for each portion of the protective housing and each laser product should have caution labels that identify the class of laser and warn of laser radiation. Since, July 1976, DoD was exempt from the provisions of 21 CFR 1040 for laser products that are used exclusively by DoD components and that are designed for actual combat or combat training operations or are classified in the interest of national security. In July 2002, the FDA issued “Guidance on the Department of Defense Exemption from the Food and Drug Administration (FDA) Performance Standard for Laser Products; Guidance for Industry and FDA,” Laser Notice No. 52, to provide guidance on exemptions for laser products that do not comply with FDA safety and health requirements.

### ***Laser Hazard Classifications***

ANSI established laser hazard classifications to guide the safe use of lasers. ANSI Z136.1–2007, “American National Standard for the Safe Use of Lasers,” identifies the criteria for determining the level of hazard inherent in a laser system and the extent of safety control measures required for safe use of the laser. Lasers can range from class 1 lasers, which are safe for direct beam viewing under most conditions, to class 4 lasers, which require the most strict controls. ANSI laser standards are tailored to single-source lasers, which are lasers with a single light cavity. ANSI laser standards do not specifically discuss multi-source lasers, which are lasers with multiple light cavities.

# Appendix D. Timeline for Fulfilling the Urgent Request for Laser Dazzler Capability

The timeline highlights the Marine Corps management actions of the urgent needs process followed to fulfill the urgent request for laser dazzler capability. Each action is represented by a rectangle. The dates under the rectangles indicate when the action occurred. The solid arrows pointing down represent the passage of time. The gray area represents the delays in the urgent needs process. The triangles represent when the action could have occurred if the delays in the urgent needs process had not occurred. The dotted arrows pointing across represent the passage of time, had the delays in the urgent needs process not occurred.\* The event in blue indicates when the Marine Expeditionary Forces rotated and is outside the urgent needs process. The color, number, and letters in the timeline reflect an action described in the left column.

Key:	
	Objective A
	Objective B
	Objective C
	Objective D
	Breakdown Period in Urgent Needs Process
	Event Outside Urgent Needs Process
	Event Inside Urgent Needs Process
	Estimated Occurrence of Event Without Delay in Urgent Needs Process
	Actual Passage of Time
	Estimated Passage of Time Without Delay in Urgent Needs Process
	Marine Expeditionary Forces Rotation

Acronyms
AFRL – Air Force Research Laboratory
CDIB – Capabilities Development Integration Board
CG – Commanding General
DC, CD&I – Deputy Commandant, Combat Development and Integration
GBD-IIIIC – Green Beam Designator-III Custom
JNLWD – Joint Non-Lethal Weapons Directorate
LSRB – Navy Laser Safety Review Board
MARCENT – U.S. Marine Forces Central Command
MCCDC – Marine Corps Combat Development Command
MCSC – Marine Corps Systems Command
MEF – Marine Expeditionary Force
MROC – Marine Requirement Oversight Council
NTIP – Naval Treaty Implementation Program
USoN – Urgent Statement of Need

\* The audit team calculated the passage of time represented by the downward facing arrows by subtracting 128 days to the actual date of the event. From February 22, 2006, through June 29, 2006, is 128 days.

**A. Identify capability gap and submit urgent request**

1. CG, II MEF (Forward), initiated urgent request for laser dazzler capability.
2. MARCENT approved urgent request and submitted request to MCCDC for processing.

**B. Identify course of action to resolve urgent need**

1. MCCDC received laser dazzler urgent request and coordinated request with JNLWD to identify materiel solution.
2. In response to JNLWD request for hazard analysis, AFRL reported on the results of hazard analysis conducted on 4 lasers.
3. Based on AFRL hazard analysis results, CG, MCSC, recommended the GBD-IIIC laser to the CG, II MEF (Forward).
4. CG, II MEF (Forward), agreed to accept GBD-IIIC laser to fulfill urgent need.
5. MCCDC and MCSC obtained additional approval needed for nonlethal weapons and lasers.
  - a. Dahlgren Division evaluated GBD-IIIC laser for safety and radiation hazard. Dahlgren also evaluated the GBD-IIIC laser compliance with Navy and Marine Corps laser policy.
  - b. MCCDC developed concept of employment for GBD-IIIC laser use in combat.
  - c. Naval Judge Advocate General determined GBD-IIIC laser complied with treaty obligations, Federal laws, and international laws of armed conflicts.
  - d. NTIP director determined GBD-IIIC laser complied with arms control treaties and international agreements.
  - e. Chairman of the Navy LSRB approved fielding of the GBD-IIIC.

**\*\*At this point, MCCDC identified a viable solution as potential course of action. However, the solution was not immediately submitted for CDIB; DC, CD&I; and MROC approval.\*\***

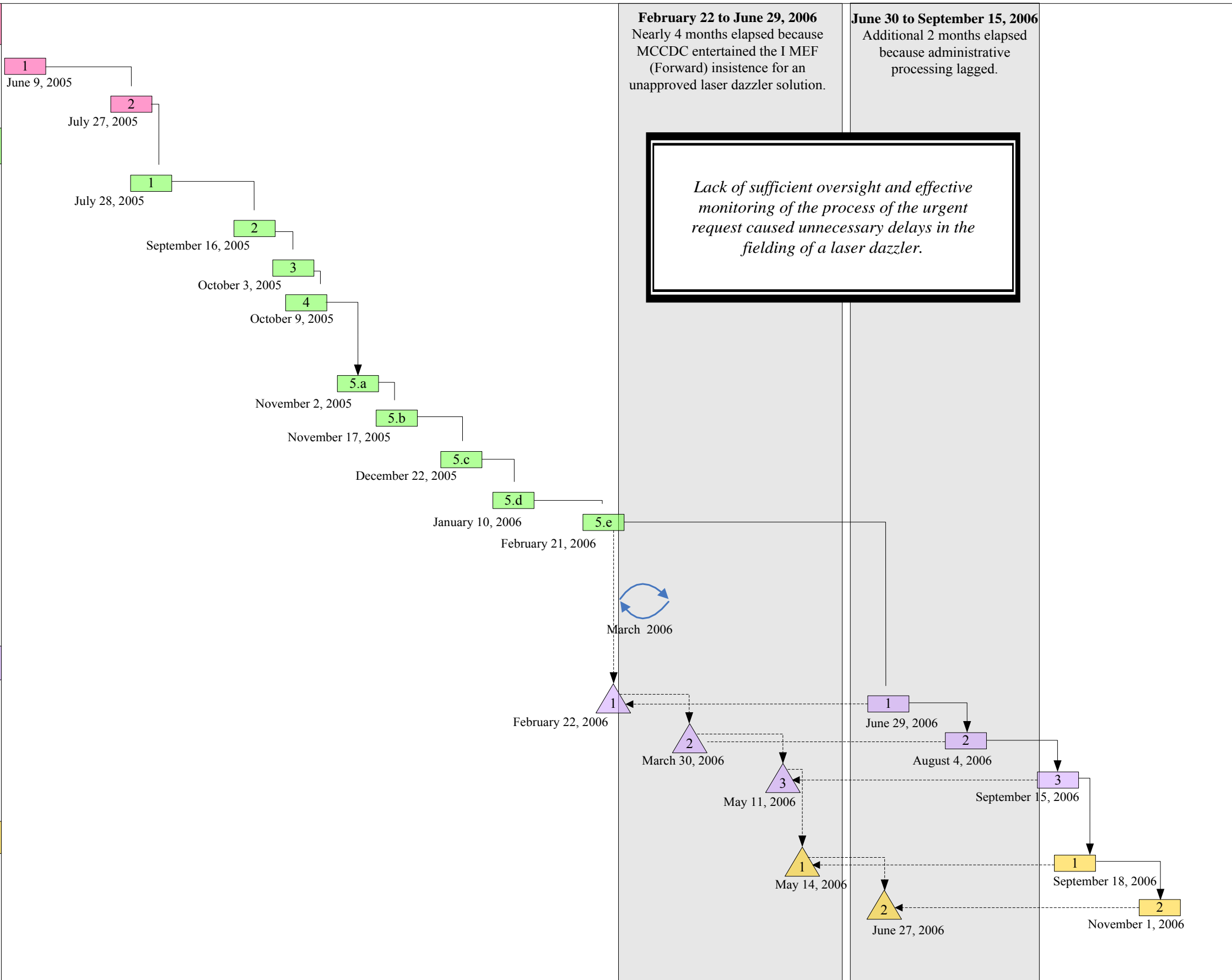
Marine Expeditionary Forces rotated in March 2006. I MEF (Forward) replaced II MEF (Forward).

**C. Obtain immediate MROC approval for identified course of action**

1. CDIB recommended GBD-IIIC laser as course of action to the DC, CD&I.
2. DC, CD&I, accepted CDIB recommendation and approved the GBD-IIIC laser as course of action.
3. MROC approved the GBD-IIIC as course of action for the laser dazzlers urgent request.

**D. Provide rapid procurement of a materiel solution that meets urgent need**

1. DC, CD&I, issued USoN authorizing MCSC to procure 400 GBD-IIICs.
2. MCSC awarded contract for 400 GBD-IIICs for \$3.6 million.



**February 22 to June 29, 2006**  
 Nearly 4 months elapsed because MCCDC entertained the I MEF (Forward) insistence for an unapproved laser dazzler solution.

**June 30 to September 15, 2006**  
 Additional 2 months elapsed because administrative processing lagged.

*Lack of sufficient oversight and effective monitoring of the process of the urgent request caused unnecessary delays in the fielding of a laser dazzler.*



# Glossary

## ***Capability Development Document***

A Capability Development Document is a document that captures the information necessary to develop a proposed program(s), normally using an evolutionary acquisition strategy. The Capability Development Document outlines an affordable increment of militarily useful, logistically supportable, and technically mature capability. The Capability Development Document supports a decision to entry into the Engineering and Manufacturing Development phase.

## ***Course of Action***

A course of action is a possible plan open to an individual or commander that would accomplish, or is related to, the accomplishment of the mission.

## ***Design Controls***

Design controls are design features or devices that are applied to a laser or its environment for the purpose of reducing laser hazards. Design controls are considered to be most effective types of controls such as key controls, beam stop, audible source, and warning lights. Design controls are also known as engineering controls.

## ***Expeditionary Force Development System***

The Expeditionary Force Development System replaced the Combat Development System. Expeditionary Force Development System supports the combat requirement generation role by translating proposed warfighting capabilities into valid requirements. Expeditionary Force Development System monitors emerging areas such as the capstone concept of Expeditionary Maneuver Warfare, Joint Concept Development and Experimentation, as well as Science and Technology Development.

## ***Glare***

Glare is an intense, bright light capable of overpowering or obscuring the vision.

## ***Laser***

Laser is an acronym for light amplification by stimulated emission of radiation. Laser is a device that emits a collimated beam of either visible or invisible electromagnetic radiation (light).

## ***Laser Classification***

Laser Classification is an indication of the beam hazard level of a laser or laser system during normal operation. The hazard level of a laser or laser system is represented by a number or a number and capital letter. The laser classifications are Class 1, Class 1M, Class 2, Class 2M, Class 3R, Class 3B, and Class 4. In general, the potential beam hazard level increases in the same order.

### ***Military-Exempt Laser***

A Military-exempt laser is a laser designed for actual combat, combat training operations, or classified in the interest of national security. When a laser meets these criteria, the laser can be exempted from complying with 21 CFR 1040 and must comply instead with DoD laser safety design requirements. In the case of the Navy and Marine Corps, Military-exempt lasers must comply with the laser safety design requirements in the Office of the Chief of Naval Operations Instruction 5100.27A and MCO 5104.1B, "Navy Laser Hazards Control Program."

### ***Multi-Source Laser***

A multi-source laser is a laser with multiple light cavities.

### ***Nominal Ocular Hazard Distance***

The nominal ocular hazard distance is the distance along the laser beam to the point at which the beam does not present a hazard to a bystander. Any location along the laser beam before that point is considered a hazard zone. Any distance at and beyond the nominal ocular hazard distance will not present a hazard to the bystander.

### ***Objective Value***

Objective value is the desired goal associated with a performance attribute, beyond which any gain in utility does not warrant additional expenditure. The objective value is an operationally significant increment above the threshold.

### ***Ocular Interruption Device***

The Ocular Interruption Device is a weapons-mounted or hand-held device capable of delivering a glare effect to the vision of targeted personnel.

### ***Procedural Controls***

Procedural controls consist of procedures and information provided to personnel for the purpose of reducing laser hazards, such as warning signs and labels, standard operating procedures, and training. Procedural controls are also known as administrative controls.

### ***Program of Record***

A program of record is an acquisition program recorded in the current Future Years Defense program or as updated from the last Future Years Defense program by approved program documents. Program documents included the acquisition program baseline, acquisition strategy, or selected acquisition report.

### ***Single-Source Laser***

A single-source laser is a laser with a single light cavity.

### ***Threshold Value***

The threshold value is the minimum acceptable operational value below which the utility of the system becomes questionable.



### ***Urgent Universal Need Statement***

An urgent universal need statement is an immediate request from units that are deployed or are awaiting imminent deployment to a combat theater. The urgent universal need statement is a request for a capability that, if not filled, places the accomplishment of the units' mission in jeopardy or unduly increases the risk of casualties.

# Marine Corps Comments



DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
3000 MARINE CORPS PENTAGON  
WASHINGTON, DC 20350-3000

IN REPLY REFER TO:  
7500  
RFR-80  
2 Dec 10

From: Commandant of the Marine Corps (RFR)  
To: Assistant Secretary of the Navy (Research, Development  
and Acquisition)

Subj: HEADQUARTERS, U. S. MARINE CORPS (HQMC) OFFICIAL COMMENTS  
TO DEPARTMENT OF DEFENSE INSPECTOR GENERAL (DODIG) DRAFT  
AUDIT REPORT D2009-D000AE-0210.000, "MARINE CORPS  
RESPONSE TO NONLETHAL LASER DAZZLER URGENT REQUEST,"  
DTD OCTOBER 19, 2010

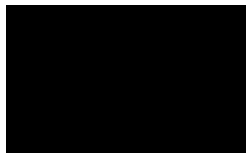
Ref: (a) DODIG memo of October 19, 2010

Encl: (1) HQMC official comments

1. Per reference (a), the subject comments are provided at the enclosure. Formulation of HQMC official comments was coordinated with the Marine Corps Combat Development Command/Deputy Commandant for Combat Development & Integration, Marine Corps Systems Command, Marine Forces Pacific Command/I MEF, Marine Forces Central Command, Marine Forces Command/II MEF, and the Programs & Resources Department, HQMC.

2. The Marine Corps concurs with the draft report's recommendation. A follow-up status report on Marine Corps actions taken to implement the report's recommendation will be provided by March 2, 2011. Technical comments on the draft report are also provided in enclosure (1).

3. For questions regarding this response, you may contact [REDACTED] Headquarters, U. S. Marine Corps Senior Audit Liaison, at [REDACTED] DSN [REDACTED] or email [REDACTED]





DEPARTMENT OF THE NAVY  
HEADQUARTERS UNITED STATES MARINE CORPS  
3300 RUSSELL ROAD  
QUANTICO, VA 22134-5001

IN REPLY REFER TO:  
3900  
CD&I  
DEC 02 2010

From: Deputy Commandant for Combat Development and Integration  
To: Commandant of the Marine Corps

Subj: MARINE CORPS COMMENTS ON DODIG DRAFT REPORT "MARINE CORPS RESPONSE TO NONLETHAL LASER DAZZLER URGENT REQUEST," DTD 19 OCT 10

Ref: (a) MCO 3900.17 THE MARINE CORPS URGENT NEEDS PROCESS (UNP) AND THE URGENT UNIVERSAL NEED STATEMENT (URGENT UNS), DTD 17 October 2008

1. Response to DODIG Recommendation. The DODIG's Draft Report states, "We recommend that the Commandant of the Marine Corps perform a review of the circumstances that led to the purchase of the 28 Compact High Power Laser Dazzlers and, if appropriate, initiate administrative action." The Marine Corps concurs with the recommendation. Actions by the Marine Corps Combat Development Command (MCCDC) regarding the 2005 Urgent UNS at issue were dominated by legal obligations to meet U.S. policy and directives observing Protocol IV to the United Nations Conventional Weapons Convention. Although Headquarters Marine Corps (HQMC) and the Commander, U.S. Marine Forces Central Command were able to direct that these lasers not be employed, the Marine Corps will review the circumstances relating to their purchase.

2. Response to DODIG Finding. The DODIG's Draft Report includes the finding that "MCCDC did not respond to the II MEF (Forward) urgent request for a nonlethal laser dazzler capability in a timely manner." The Marine Corps does not concur with this finding. It is inaccurate and unjustified. Both MCCDC and the Marine Corps Systems Command (MARCORSYSCOM) responded promptly, repeatedly, and appropriately to meet the changing needs of different commanders assigned different combat missions, ensuring those commanders' higher priority demands were met first, while rigorously following Department of Defense and Department of the Navy directives concerning the fielding of laser weapons systems.

3. Context. The simple conflict presented to HQMC by this Urgent UNS submission was to meet directives written to prevent violations of the Law of Armed Conflict while also rapidly meeting the distinct needs of successive commanders. The laser system that the Commanding General (CG) II MEF (Fwd) initially selected and that HQMC was prepared to provide was later explicitly rejected by CG I MEF (Fwd) after he assumed command in Iraq. However, the alternative laser system desired, and later purchased, by the staff at I MEF (Fwd) had not been approved by the Navy Laser Safety Review Board (LSRB), and therefore could not legally have been delivered by HQMC.

4. Policy and procedures.

a. The established purpose of the Urgent Universal Need System (UUNS) Process, at that time, was to "provide rapid acquisition of a capability in order to meet an urgent requirement." The intent of the UUNS Process was "to meet the immediate operational needs of deployed forces" as approved by Supported Commanders in the field. The Deputy Commandant for Combat Development and Integration (who also serves as CG MCCDC) was tasked by this policy to process each UUNS, perform assessments, and identify solutions. MARCORSYSCOM was tasked to "assess the ability to provide a materiel

ENCL (1)

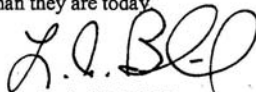
solution, accounting for production times” for each UUNS. When I MEF (Fwd) rejected CG II MEF (Fwd)’s previous approval of MARCORSYSCOM’s assessment, it was no longer possible for MCCDC to meet the purpose and intent of the UUNS Process.

b. HQMC continued, however, to attempt to limit the delay resulting from I MEF (Fwd)’s decision. The Commander, MARCORSYSCOM personally contacted the CG and Deputy CG, I MEF (FWD) to confirm his understanding that “your staff has briefed you on the BE Meyers GBD IIIC Laser Dazzler and you do not want us to procure it. ... Just want to make sure you want me to stop work on the BE Meyers GBD IIIC dazzler and begin researching an eye safe laser or other device that accomplishes the same mission...not sure that one exists.” MCCDC informed I MEF (Fwd), by Naval Message, of the legal constraints applied by the Laser Safety Review Board (LSRB), stating that “If the LE Systems CHP Laser is the only solution to the I MEF Dazzler Need, fielding it will require up to 6 additional months IOT complete LSRB review, MROC approval, Statement of Need, and contract award.”

c. The recommendation later made by CG MCCDC, and approved by the Assistant Commandant of the Marine Corps, to procure the laser system rejected by I MEF (Fwd) was based on a judgment that the systems could be rapidly acquired and safely-employed, after deployment of dedicated New Equipment Training Teams. While this decision risked expending resources on equipment commanders would not use, it was proven correct as forces in Iraq requested additional quantities of the lasers. Meanwhile, numerous injuries have been reported by members of other Services using the systems preferred by the I MEF (Fwd) staff. The conclusion of the Draft Report that delays were simply “unnecessary” ignores the due diligence required to develop a solution that observed the Law of Armed Conflict, minimized the possibility of wasting resources, and met the operational needs of commanders in the field.

4. Actions taken since. We have exhaustively reviewed and redesigned what is now-termed the Urgent Needs Process (UNP) since the events in question began in 2005, incorporating industry best-practice “Lean Six Sigma” methodologies. Policy for the UNP has been updated three times since the events recounted in the Draft Report, and the events in question have resulted in specific improvements. Most importantly, the reference recast the purpose and importance of the UNP, largely to capture lessons-learned. That Marine Corps Order was later adopted, almost identically, by the Secretary of the Navy in his Instruction 5000. Finally, we have invested substantially in staff at HQMC and at the various Marine Forces headquarters, as well as in two generations of information technology to allow for the online submission, tracking, and approval of urgent needs with our “Virtual Needs System,” accessible to users across the Marine Corps.

5. Summary. The Marine Corps embraces our responsibility to best meet the mission-critical needs of our forces in combat. We constantly review our past performance in order to do so, and fully support efforts to determine what we have done and what we can do better. We readily accept that each response to every Urgent Need submitted by commanders of Marines and Sailors in combat must be rigorously examined for opportunities to improve our process and procedures, and will continue to work to ensure that our responses will be better tomorrow than they are today.



L. A. BLASIOL  
By direction

# Department of the Navy Comments



THE ASSISTANT SECRETARY OF THE NAVY  
(RESEARCH, DEVELOPMENT AND ACQUISITION)  
1000 NAVY PENTAGON  
WASHINGTON DC 20350-1000

MEMORANDUM FOR DEPARTMENT OF DEFENSE DEPUTY ASSISTANT  
INSPECTOR GENERAL FOR ACQUISITION AND  
CONTRACT MANAGEMENT

SUBJECT: Department of Defense Inspector General (DoDIG) Draft Report D2009-  
D000AE-0210.000, "Marine Corps Responses to Nonlethal Laser  
Dazzler Urgent Request"

The Department of the Navy (DoN) has reviewed DoDIG Draft Report D2009-  
D000AE-0210.000 and concurs with DoDIG's recommendation. Response from the  
Marine Corps to the draft report recommendation and finding is provided in the  
attachment.

The DoN recognizes DoDIG provides a much-needed service and that  
differences of opinion over the effectiveness of the process for responding to urgent  
needs are part of the process in accomplishing these types of audits. I believe it is  
important to recognize the Marine Corps' viewpoint regarding this draft report and  
request it be included in the final report.

A handwritten signature in black ink, appearing to read "SJS", is positioned above the name of the signatory.

Sean J. Stackley

Attachment:  
As stated

cc:  
DASN(ExW)  
CMC (RFR)



# Inspector General Department of Defense