DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 2010

HEARINGS

BEFORE A

SUBCOMMITTEE OF THE

COMMITTEE ON APPROPRIATIONS

HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

SUBCOMMITTEE ON DEFENSE

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Air Force Military Personnel	**281**
Military Personnel—Army	**367**

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U.S. GOVERNMENT PRINTING OFFICE

56–260 WASHINGTON : 2010

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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 2010

TUESDAY, MARCH 10, 2009.

MARINE CORPS GROUND EQUIPMENT

WITNESS

LIEUTENANT GENERAL GEORGE J. FLYNN, DEPUTY COMMANDANT OF THE MARINE CORPS, COMBAT DEVELOPMENT AND INTEGRATION

MR. MURTHA'S OPENING STATEMENT

Mr. MURTHA. The committee will come to order.

I want us out of here by 11:00, General. I hope your answers won't be too long. The thing that I wanted to talk about mainly is the cost of the Expeditionary Fighting Vehicle (EFV) and how you are going to get this program under control.

We spent $4 billion up to this date, and you just took over the program, but we need to have some recommendation from you for the subcommittee so that we will be able to follow this program more closely. We keep putting money into research, and we keep finding you need more and more money. You save money by cutting down on the numbers, but I am not sure how much research you are saving. But the money you have asked for this year—we have got to know as you go along exactly where we are so that we can cut the thing off, we can come to an agreement to cut this thing off, because you have got a lot of good programs, and usually you run those programs very well, but I am just worried about this particular program.

It started when I was Chairman before. I went to see it down at Dumfries, and it looked like it was going to be a program we needed. We have done very few amphibious operations under duress, and I believe the Marine Corps needs a capability of landing against a threat.

But having said that, we have got to get this program under control. It is just so expensive, and when I went back and looked, I had the staff go back and find the World War I—you see this, Bill, a World War I tank. Bill, see this World War I tank? It looks like their EFV.

Mr. YOUNG. They used a lot of imagination.

Mr. MURTHA. Yeah. This is today's vehicle, and that one probably costs less than $1,000 apiece. But at any rate, we look forward to hearing your testimony, and I will see if Mr. Young has any comments.

OPENING STATEMENT BY MR. YOUNG

Mr. YOUNG. Mr. Chairman, thank you very much. And I want to welcome the general to be here this morning.

Having the Marines able to move lightly and quickly, I think, is extremely important. And probably we have seen in Iraq the Marines have gotten a little heavier. And I know that in some conversations and meetings, the case was made for a faster, lighter vehicle that would be more secure and more effective. So, General, we are just anxious to hear what you have to tell us about that, because I think we all want to provide whatever it is the Marine Corps needs to be an effective fighting force, which the Marines have always been.

Mr. MURTHA. General, summarize your statement. We will put the full statement in the record, without objection.

General FLYNN. I understand, sir.

SUMMARY STATEMENT OF GENERAL FLYNN

General FLYNN. Mr. Chairman, Congressman Young and members of the committee, it is an honor and a privilege to appear before you today.

We share a common passion, and that is that all of us are committed to providing the men and women in uniform the best leadership, training, equipment, family support and quality of life possible. With this in mind, I am prepared to discuss your Marine Corps' ground equipment requirements today.

Our requirements are the results of detailed and a disciplined process that is informed by several things: first of, all our legislative roles and missions in Title 10; the guidance we received from the Secretary of Defense; the Commandant's guidance, to include the core competencies contained in our recently published Vision and Strategy; the combatant commanders' needs; and also requirements that are generated from the bottom up by our warfighters. Additionally, as the Nation's expeditionary force in readiness, we must also consider the need for both amphibious and land-based operations, and the requirement for a balance in capability across the range of military operations that we are likely to see so that we can gauge in everything from presence to crisis response to conventional operations.

Our requirements must be able to respond to threats we see today while guarding against surprise in the future. It is my belief that our ground requirements reflect the balance that is needed for the current threat and any potential threats in the future by our Nation from your Marine Corps.

I thank the Committee for all their support, sir, and I am ready to answer your questions, sir.

[The statement of General Flynn follows:]

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SUBCOMMITTEE ON DEFENSE

STATEMENT OF

LIEUTENANT GENERAL GEORGE J. FLYNN

DEPUTY COMMANDANT OF THE MARINE CORPS
(COMBAT DEVELOPMENT AND INTEGRATION)

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE

SUBCOMMITTEE ON DEFENSE

CONCERNING

MARINE CORPS GROUND EQUIPMENT

ON

MARCH 10, 2009

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SUBCOMMITTEE ON DEFENSE

Lieutenant General George J. Flynn

Deputy Commandant for Combat Development and Integration

Lieutenant General Flynn graduated from the United States Naval Academy in 1975. He holds a Master of Arts Degree in International Relations from Salve Regina College, a Master of Arts Degree in National Security and Strategic Studies from the Naval War College, and a Master of Science Degree in National Security and Strategy from the National War College. He is a Distinguished Graduate of the College of Naval Command and Staff and the National War College.

Lieutenant General Flynn's command assignments include: Commanding Officer, HQ Battery, 2nd Battalion, 12th Marines; (1979-1980); Commanding Officer, L Battery, 2nd Battalion, 12th Marines (1980); Commanding Officer, P Battery, 5th Battalion, 10th Marines (1984-1985); Commanding Officer, 5th Battalion, 10th Marines (1992-1993); Commanding Officer, Officer Candidates School (1999-2001), Commanding General, Training Command (2002-2004), Commanding General, Training and Education Command (2006-2007). Commanding General, Marine Corps Combat Development Command (2008-).

Lieutenant General Flynn's staff assignments include: Forward Observer, Fire Direction Officer, Battery Executive Officer and S-4 A, 2nd Battalion, 11th Marines (1976-1979); Officer Selectior Officer, Manchester, New Hampshire, (1981-1984), Operations Officer, 5th Battalion, 10th Marines (1985-1986), Plans Officer, Plans Policies and Operations Department, Headquarters Marine Corps (1987-1989); Junior Aide-de-Camp to the Commandant of the Marine Corps (1989-1991); Assistant Fire Support Coordinator, 2d Marine Division (1991-1992); Future Operations Officer, III Marine Expeditionary Force (1994-1995); Military Assistant to the Executive Secretary to the Secretary of Defense (1995-1997); Military Fellow, Council on Foreign Relations (1997-1998); Head, Strategic Initiatives Group, Headquarters Marine Corps (1998-1999); Military Secretary to the Commandant of the Marine Corps (2001-2002); Deputy Commanding General, Training and Education Command (2002-2004). Chief of Staff and Director, Command Support Center, United States Special Operations Command (2004-2006). Deputy Commanding General Multi-National Corps-Iraq (2008).

Introduction

Chairman Murtha, Congressman Young, and distinguished members of this Subcommittee, I am honored to appear before you today. Thank you for this opportunity to discuss Marine Corps ground equipment programs. Before we begin, on behalf of all Marines and their families, I want to thank you for your continued support for our Marines as they remain engaged in combat operations in OPERATION IRAQI FREEDOM, OPERATION ENDURING FREEDOM, and other contingencies.

Marine Corps Vision & Strategy 2025

Upon assuming command, the Commandant of the Marine Corps stated his intent to "posture the Marine Corps for the future." He directed his leaders to conduct an informed assessment of potential future security environments and report potential implications for the Corps as they relate to the functions of organize, train, and equip.

The assessment concluded that a significant trend of the future security environment is the blurring of previously considered conventional forms of conflict into what can be described as hybrid challenges. Hybrid challenges represent combinations of conventional, irregular, catastrophic, and disruptive threats in addition to those associated with terrorism and criminality, and therefore concurrently present primitive and advanced threats. The assessment also predicted hybrid challenges will be the *most likely* form of conflict facing the United States in the future.

With this in mind, we published a vision and strategy that provide the focus and direction for where we intend to take our Corps, gives combatant commanders a concept of how we might best be employed, and provides our civilian leadership a reference point as to how we see the Corps' contributions to national defense. This document is derived from strategic guidance at the

national and departmental levels and illustrates our utility and value within the joint warfighting community. It is grounded in our identity, ethos, values, and core competencies and is the fundamental basis for our strategic planning to meet the challenges of the 21st Century.

Our Vision and Strategy describes a force in readiness that, by design, is capable of quickly adapting to an inherently unpredictable future with balanced capability across the range of military operations. It is founded on our enduring characteristics and capabilities, but also reflects shifts in posture and practices designed to enhance today's Corps for tomorrow's challenges. The strategy delineates institutional objectives to realize the vision. Additionally, we identified six core competencies that are our touchstones and describe our particular skill sets. They are "what we do" and are what we organize, train and equip to do.

Core Competencies. Our core competencies represent our fundamental contribution to the Nation's joint warfighting capabilities. These core competencies illustrate capabilities that have existed throughout our history as well as some new areas in which we believe we are particularly well suited to excel. These competencies are:

- **Conduct persistent forward naval engagement and respond as the Nation's force in readiness.** Readiness means being engaged in the littorals and contributing to the prevention of conflict in addition to being able to react rapidly across a wide range of tasks from engagement to forcible entry.
- **Employ combined arms and operate as part of a joint or multinational force.** This approach can be applied across the range of military operations.
- **Provide forces for service with the Navy and for operations ashore.** Our modernization programs are designed to enable Marines to deploy and fight from naval vessels, austere expeditionary bases, or any combination. Efforts such as seabasing, the

Special Purpose Marine Air-Ground Task Force (MAGTF) focusing on Security Cooperation working with Global Fleet Stations will increase our partnership with the Navy and provide forces for operations across the range of military operations.

- **Conduct joint forcible entry operations from the sea.** When access to critical regions is denied, Marines are ready to overcome enemy defenses. Together, the Navy and Marine Corps provide the Nation with its primary capability to project and sustain combat power ashore across the range of military operations.
- **Conduct complex expeditionary operations in the urban littorals and other challenging environments.** This includes counterinsurgency, counterterrorism, peace operations, and advisor tasks.
- **Lead joint and multinational operations and enable interagency activities.** Marines are well qualified to enable the introduction of follow-on forces and facilitate the integration of military and interagency efforts, especially in expeditionary and austere environments.

Marine Corps Expeditionary Nature. As General Conway has stated, expeditionary excellence requires Marines who are morally, physically, and mentally tough. This means that being truly "expeditionary" is both an individual as well as an institutional mindset, not simply maintaining the ability to deploy overseas. Therefore, we are organized, trained, equipped, and deployed with the expectation of operating in inhospitable conditions against committed and competent foes. We will focus on being fast, austere, and lethal: ready to travel fast, living hard while functioning effectively in austere conditions, and maintaining the ability to be lethal across the range of military operations.

As a Corps, we will strike a balance between being heavy enough to succeed in a conventional warfare environment and light enough to rapidly deploy to austere locations in the littoral regions of the world. Future operational environments will place a premium on agile and adaptable expeditionary forces. Likewise, we will apply lessons learned from current operations in Iraq and Afghanistan to maintain an edge against adaptive opponents. We will maintain the ability to sustain ourselves in operations through the use of either a sea base or an initial lodgment ashore. This supports our vision of fielding sustainable MAGTFs that exploits joint capabilities, and leverages the joint and multinational advantages of seabasing.

Our expeditionary nature, combined with our naval character, will ensure we excel as an agile force that can react rapidly in and around the littorals of the world. This forward, naval, expeditionary posture permits our forces to operate in areas that others can not, and will not, due to lack of infrastructure, access, or will.

Relevance of the Marine Air Ground Task Force. More than ever, the Nation requires an expeditionary force in readiness. The future will be characterized by a requirement to meet a broad set of missions from security cooperation activities such as training and advising foreign military forces to humanitarian and disaster relief operations, from deterring aggression by defeating hybrid threats to large-scale conventional wars. This requires a wide range of capabilities and equipment sets for our forward deployed forces and a more balanced and multi-capable force to successfully perform the range of missions. The inherent scalability and flexibility of the MAGTF provides this balance.

Our MAGTFs are multicapable; decisive across the range of military operations with their capacity tailored to combatant commanders' requirements. They are inherently balanced and can be specifically tailored to meet discrete missions across the range of military operations

as the combatant or joint force commander requires. The MAGTF is responsive to the combatant commander's demand signal and can focus training and education to address counterinsurgency, counterterrorism, or other irregular warfare challenges while maintaining the ability to aggregate and fulfill a traditional role in major combat operations.

Naval forces, particularly maritime combined arms expeditionary forces, are a valuable asset for the President and Secretary of Defense. Naval forces provide strategic mobility, speed of employment, the ability to operate from over the horizon in an access denial environment, and the ability to conduct sustained operations for extended periods of time. They give joint force commanders an extraordinarily versatile, balanced and lethal asset that can respond to any of tomorrow's challenges.

Modernization of Marine Corps Ground Equipment

Requirements generation overview. The Marine Corps core competencies will guide our force development efforts over the next two decades - ensuring that the Corps will be prepared to accomplish the broad range of missions that we will face in the future. The Expeditionary Force Development System provides the process for identifying and prioritizing Marine Air Ground Task Force capabilities, for documenting capability gaps, and for developing strategies to eliminate those gaps. Resources for prioritized initiatives and programs of record are considered during the Program Objective Memorandum build. Through this system, we shape required capabilities and prioritize our efforts in a disciplined and effective approach to organize, train, and equip our forces. In using the Expeditionary Force Development System, required capabilities are identified that will contribute to the execution of joint concepts, Marine Corps missions, and to meet the needs of the Combatant Commanders.

Lighten the MAGTF. Safeguarding Marines is one of our highest priorities and is one of our most challenging. Our research and development in armoring technologies is doing much to increase

the effectiveness of armor and in many cases, also reducing the weight for both individual protection as well as vehicle armoring. The bottom line is that the focus on armor as the principal means of protecting our force is making us too heavy. Our business is a deadly one and one that we don't take lightly but we have to view force protection as more than armor if we are ever to lighten the MAGTF. In fact, force protection of the MAGTF is also accomplished through our tactics, techniques and procedures and through increased battle space awareness. Lightening the MAGTF makes us faster and more agile; ultimately, making us more effective and deadly to the enemy. Speed and maneuverability inherently provide a measure of force protection, particularly when combined with proper training. We achieve battle space awareness through integration of persistent and responsive Intelligence, Surveillance, and Reconnaissance delivered by our reconnaissance forces, by Unmanned Aerial Sensors and through other sensor and electronic technologies. These systems do not eliminate risk but they do provide an additional layer to protect our Marines.

We are developing policies and acquisition practices for our future equipment that will make it more modular and scalable to allow us to increase and decrease armor protection and its associated weight according to the commander's assessment of mission requirements and threat. This means that there will be times in the future when Marines and vehicles are armored significantly less than they are today, but with increased mobility and speed. These decisions will not be taken lightly but they are absolutely necessary to enable the accomplishment of our mission. We must ensure that our commanders in the field have flexibility and the ability to tailor equipment sets to match the threat, the operating environment, and demands of the mission at hand.

The expeditionary nature of the MAGTF demands a force that is capable of the rapid movement of combat forces, whether by surface ships and amphibious landing craft, aircraft, vehicles, or on foot. Today's MAGTF is many times more lethal and more multi-mission capable than it was even a decade ago and while some of the equipment used by individual Marines is lighter and more effective than the equipment it replaced we are still a long way away from lightening the load Marines are burdened to carry. Of particular concern is armor, both personal protective armor as well as armoring of combat vehicles. A relatively recent and essential trend, increasing armor on Marines and their vehicles, born from operations in Iraq, threatens to erode our expeditionary capabilities and reduce the effectiveness of our forces. The protection of our Marines is paramount and while body and vehicle armor are life savers other methods for protecting our Marines are equally as important. Our protection philosophy must include training in personal protective measures, tactics, techniques and procedures and training our leaders in personal protective measures that allow flexibility and protection scalability. Our commanders need the flexibility to adjust protection levels as the situation dictates and provide scalability of personal protection equipment, both personal and vehicular, that provides levels of protection that reduce the burden on our personnel and equipment while at the same time enhancing our tactical effectiveness.

Ground Equipment Readiness. Ground force readiness for forward deployed units remains above 90% due in no small part to the hard work and dedication of our Marine and civilian maintainers in theater as well as industry representatives forward deployed. Six years of constant use under harsh operating conditions have subjected our ground equipment to significant wear and tear. The additional weight from added armor plating stresses our equipment beyond designed capability which only exacerbates the challenge of maintaining

equipment readiness for deployed forces. While deployed equipment readiness remains high, the bill payer has been the supply readiness rates for home station units. However, thanks to the supplemental funding support from Congress, we expect to see a steady increase in supply readiness rates as we continue to receive delivery of procured equipment.

Pre-positioning Programs. The Marines Corps' pre-positioning programs are critical to expeditionary operations. They help enable Marine forces to respond to current and future contingency operations and mitigate risk for the Nation. Throughout the last several years, targeted withdrawal of equipment from the pre-positioning program has been a key element in supporting combat operations and growth of the Marine Corps. By drawing on these stocks, the Marine Corps has been able to provide Marines with vital warfighting equipment without waiting for the industrial base to satisfy our new ground equipment requirements.

Restoring our pre-positioning programs remains a high priority. We must ensure they are reset with the most capable equipment possible. The Maritime Pre-positioning Squadrons (MPSRONs) are rotating through scheduled Maritime Prepositioning Force (MPF) Maintenance Cycle–9. MPSRON-1 completed MPF Maintenance Cycle-9 in September 2008 and is at 91% of its full equipment set and is expected to be fully reset at the completion of its next maintenance cycle in 2011. Equipment from MPSRON-2 was offloaded to support Operation IRAQI FREEDOM, and much of that equipment remains committed to forward operations today. With projected deliveries from industry, MPSRON-2 will complete MPF Maintenance Cycle-9 in June 2009 with approximately 90% of its planned equipment set, and we plan to fully reset MPSRON-2 in Fiscal Year 2012. MPSRON-3 is currently at 100% of its equipment set, completed during MPF Maintenance Cycle-8 in March 2007.

Our bilateral cost-sharing agreement with the Kingdom of Norway, the Marine Corps Prepositioning Program – Norway (MCPP-N), continues to prove its operational relevance as a sourcing solution for equipment. We have used ground equipment from the MCPP-N to support current operations in the CENTCOM AOR, humanitarian operations in the Republic of Georgia, Theater Security Cooperation engagement in Africa, and as part of the Grow the Force initiative. In the future we will continue to reset MCPP-N in accordance with the operational priorities of the Marine Corps.

Tactical Wheeled Vehicle Strategy.

The focus of Marine Corps plans for future tactical mobility is on replacing the venerable Amphibious Assault Vehicle (AAV) and the family of High Mobility Multipurpose Wheeled Vehicles (HMMWVs). The design and capabilities of our future tactical combat vehicles are informed and guided by our amphibious and expeditionary nature, by lessons learned from combat operations and by close partnership with industry, which has helped us to understand technical requirements and make better decisions and tradeoffs during system development. The vehicle designs must achieve balance in what we refer to as the iron triangle: protection, payload, and performance. Our future tactical combat vehicle fleets must provide the commander with balanced capability- vehicles should be adequately protected, yet maneuverable and functional across the range of military operations. Where speed, tactical maneuverability, environmental and terrain considerations dictate the most important capabilities needed in our vehicles, we will carefully consider the tradeoffs in conventional heavy armor protection versus the operational requirements for performance. These tradeoffs are not taken lightly and they are done with full consideration that our Marines will be taking the vehicles into harm's way. Where possible, we are defining requirements for our vehicles that include scalable protection, meaning that it will

be possible, through kitted armor applications to adjust the level of protection as dictated by the threat condition. We anticipate that as technology improves, we will be able to achieve greater degrees of ballistic and explosive protection with lighter materials. The acquisition objectives for our tactical vehicles are based on maintaining our current infantry lift capacity into the future and on restoring our payload capacity throughout the rest of the Marine Corps. In order to do that we will field the Expeditionary Fighting Vehicle (EFV) and the Marine Personnel Carrier (MPC) and we will begin replacing selected HMMWVs with the family of Joint Light Tactical Vehicles (JLTVs).

Current Tactical Vehicle Acquisitions

Expanded Capacity Vehicles. The Expanded Capacity Vehicle is the latest configuration for the HMMWV fleet. The Expanded Capacity Vehicle increased the gross vehicle weight to 12,100 pounds and has a more powerful turbo-charged engine, upgraded suspension and integrated air conditioning system. Additionally the Expanded Capacity Vehicles are designed to accept armor kits installed either at the factory or at organic maintenance facilities. When older model HMMWVs reach the end of economical useful life they will be replaced by the Expanded Capacity Vehicle. The Marine Corps requirement for the HMMWV/Expanded Capability Vehicle fleet is currently 27,942 vehicles. A total of 24,770 HMMWVs have been procured of which 9,029 are Expanded Capacity Vehicles.

Internally Transportable Vehicle. The Internally Transportable Vehicle will provide a deployed MAGTF with a ground vehicle that is internally transportable in the MV-22 tilt-rotor aircraft, CH-53, and MH-47 aircraft. The vehicle will serve primarily as a high mobility weapons-capable platform to support a variety of operations and to provide ground units greater mobility thereby enhancing their mission performance and survivability. The Internally Transportable Vehicle is

in Full Rate Production. We began fielding beginning in January 2009. The Marine Corps Requirement is 729 vehicles, 110 are being procured in Fiscal Year 2009.

Mine Resistant Ambush Protected (MRAP) vehicles. MRAP vehicles are designed to protect vehicle crew and passengers from mine blasts and fragmentary and direct fire weapons. They are designed for protected mobility with a "V" shaped hull and are employed to protect against mines and improvised explosive devices. The current Marine Corps requirement of 2,225 vehicles is comprised of three different variants which supports our ongoing theater operations and home station training. Our fielding requirements were satisfied in June 2008.

The Marine Corps is seeking a lighter, more agile MRAP vehicle better suited to the rugged environment in OPERATION ENDURING FREEDOM. We are aggressively executing an acquisition strategy to quickly procure this MRAP- All Terrain Vehicle (M-ATV). Submitted proposals are currently under review and the evaluation will include assessments of production representative vehicles. The Marine Corps is conducting the necessary analysis to establish our specific vehicle requirements for the MRAP-All Terrain Vehicle; where a vehicle with HMMWV like mobility and MRAP survivability is sought.

In addition to our current programs a number of future programs are in various stages of the acquisition process.

Future Tactical Vehicle Acquisitions

Expeditionary Fighting Vehicle. The EFV provides the Marine Corps and the nation with our only self-deploying, tracked, amphibious operations capable, fighting vehicle and is our Commandant's number one acquisition priority. The vehicle's design will permit it to carry combat-loaded Marines ashore from ships positioned 25 or more nautical miles off shore providing the ships maneuver space as well as increased force protection for the battle fleet. Its

ability to conduct high speed maneuver at sea as well as on land, combined with its weapon, communication, and protective systems make it a highly survivable and lethal capability. The EFV will be built in two configurations. The command and control variant will support and enable infantry regimental and battalion command and control. The personnel variant will carry a reinforced rifle squad and 3-man crew. The program completed critical design review in December 2008 and is on schedule to begin Low Rate Initial Production in 2012. The acquisition objective is 573 vehicles.

Joint Light Tactical Vehicle. This is a Joint Marine Corps/Army program with the Army as the lead Service for acquisition. The JLTV family of vehicles will be designed to replace multiple configurations of the current family of HMMWVs. The Marine Corps' initial acquisition objective is 5,500 vehicles but the final objective could be 25,000 or more to facilitate replacement of all HMMWVs in our inventory. As the Marine Corps's light utility vehicle it will be required to support multiple mission roles from command and control, to cargo and troop carrying, to specialized ambulance and shelter carriers. Several variants of the JLTV will be required to be externally transportable by Marine Corps Heavy Lift CH-53 helicopters and that requirement will define maximum allowable weights. The JLTV family of vehicles will have scalable levels of protection consisting of a base armor capability and several designed safety and protection capabilities as well as kitted, add-on armor. The basic vehicle design will account for the heaviest anticipated payloads including armor kits to permit the vehicle to retain its all-terrain mobility capabilities even when fully loaded.

Marine Personnel Carrier (MPC). The MPC will be a multi-wheeled, armored personnel carrier designed to operate across the range of military operations but focused on an irregular warfare operating environment characterized by operations in constrained and urban terrain.

Required to carry 8-10 combat loaded Marines and 2-man crew, the MPC will enable high-speed land maneuver as well as substantial ballistic protection to embarked Marines. It is scheduled to begin Engineering, Manufacturing and Development in 2010, with initial operational capability in 2015. The acquisition objective is approximately 630 vehicles.

Individual Weapons

The M16A4 rifle and M4 carbine are the Marine Corps' service weapons. They are both proven weapons and have shown themselves to be accurate, reliable and durable in operations in Iraq and Afghanistan. We have no immediate plans to replace these weapons but we remain closely linked with the other Services and their individual weapons programs. We have made considerable investment in a variety of day and night optics, which are compatible with both the M16A4 and the M4 carbine, which benefited Marines in Iraq and Afghanistan. We have incorporated the Rifle Combat Optic into our annual service rifle requalification requirements so that Marines will have more opportunities to become proficient in its use. Our M9, 9mm pistol is principally used as a secondary weapon by Marines and it has performed satisfactorily.

In 2010 our infantry squads will begin receiving the Infantry Automatic Rifle (IAR) as a replacement for the M249 Squad Automatic Weapon (SAW). The SAW will be retained in the infantry battalions and throughout the Marine Corps as a light machine gun. The principal benefit of the new magazine-fed IAR comes from reduced weight and length permitting the automatic rifleman to maneuver more easily with the squad. We are also developing a replacement for our Shoulder Launched Multi-Purpose Assault Weapon (SMAW) to give Marines a lighter weight, more durable weapon with enhanced targeting capabilities and most importantly, the capability to fire from within enclosed spaces thereby reducing their exposure to enemy fire. Our Marine Corps sniper teams are receiving a new suite of equipment to enhance precision and lethality. The suite will include the 7.62mm Rapid Engagement Precision Rifle,

which will replace the M39 Enhanced Marksmanship Rifle. Additionally, sniper teams will receive the Sniper Rifle – 21 that will replace the M40A5 Sniper Rifle.

Surface indirect fires

Organized in a Triad of Ground Indirect Fires, organic Marine Corps assets ensure persistent, complementary, and redundant fires. The triad is composed of three distinct systems that provide adequate range and volume to support maneuver. The longest range system, the High Mobility Artillery Rocket System, provides both precision and volume rocket based fires. The M777 is a medium-caliber artillery system that is currently replacing the M198. The M777 is lighter, more mobile, and more capable than the M198. The final component of the Triad is the Expeditionary Fire Support System, which is a towed 120mm mortar. This system is designed to be paired with the Internally Transportable Vehicle. When employed with heli-borne forces supported by the MV-22, this system will provide responsive fires to commanders at ranges and lethality beyond current infantry battalion indirect fire weapons systems.

Command and Control Harmonization

The United States Marine Corps' Command and Control harmonization efforts are codified in the Marine Air-Ground Task Force Command and Control, commonly called MAGTF C2, initiatives on-going in the Marine Corps. MAGTF C2 provides Marines a synchronized and integrated Command and Control capability that is interoperable with Joint, Coalition, and Inter-Agency partners. Closely coupled with the Navy, MAGTF C2 is the Marine Corps' instantiation of the Naval FORCENET concept, and it forms the basis of the USMC portion of the Global Information Grid. Based upon Joint requirements, MAGTF C2 is a holistic approach that informs and guides Command and Control requirements development and integration across the war-fighting functions in order to provide commanders needed capability to function effectively in the Twenty-First Century environment. MAGTF C2 incorporates both

emerging Service and Joint capabilities to build a seamless, overarching Command and Control solution for the war-fighter. This top-down (Joint and Service requirements), bottom-up (War-fighter needs) approach to providing C2 capability can be seen in three major USMC initiatives: the Combat Operations Center (COC), Common Aviation Command and Control System (CAC2S), and Tactical Communications modernization.

Combat Operations Center. The Combat Operations Center is the cornerstone of the MAGTF's C2 modernization efforts, aimed at providing a common, modular, and scalable C2 system of systems across the MAGTF command echelons that is enabled by an agile, trusted, and shared communications network. The COC is the principal means by which decision-makers in the MAGTF will plan, execute, and assess operations across the range of military operations. MAGTF COC will support MAGTF operations afloat, aloft, ashore, and on the move. COC grew out of stated war-fighter requirements for a common, modular, and scalable C2 system of systems to support commanders and staffs. Inherently Joint, the COC incorporates both Joint and Service programs and DOD interoperability standards to ensure seamless connectivity to support Combatant Commander needs. This capability will be sustained and refreshed to keep pace with emerging information technologies, C2 applications, network enterprise services, and evolving DOD data standards.

Command Aviation Command and Control System (CAC2S) The Common Aviation Command and Control System is the cornerstone of Marine Corps aviation command and control modernization efforts. CAC2S emerged as a top-down, bottom up requirement to provide the aviation command and control portion of the MAGTF triad with a state of the art system of systems that will both meet war-fighter needs and incorporate Joint and Department of Defense directives for a modernized, mobile, interoperable, and common suite of capabilities. CAC2S

fuses data from sensors, weapons systems, and C2 systems into an integrated display that increases situational awareness and facilitates decision-making. CAC2S shares many common parts with the Marine Corps Combat Operations Center, thereby decreasing the logistics support footprint and simplifying training requirements. It enhances a MAGTF commander's ability to integrate MAGTF aviation capabilities in the Joint framework, and control the timing of organic, Joint, and Coalition fires, maneuver, and logistics while operating within the MAGTF battle-space.

Tactical Radio Communications. In January 2008, the Marine Corps Requirements Oversight Council approved an ambitious tactical communications modernization and procurement program. This program provides for upgrading over 120,000 tactical radio systems, focusing its effort at the company and below level. The majority of these radios are multi-band, meaning they can be used on multiple parts of the frequency spectrum, and nearly 80% of them can be used in a hand-held mode. This modernization effort allows the Marine Corps to net enable its forces at progressively lower levels, increasing both situational awareness and combat efficiency. The next step is to modernize combat vehicle radio assets, Maritime Pre-Positioned Squadrons, and training and supporting establishment radio needs. Looking towards the future, the tactical communications modernization program will provide software programmable radios that will integrate well with the Joint Tactical Radio System, and provide the network robustness needed to take advantage of the network revolution at the tactical level.

Reset

In order to maintain the appropriate balance between winning the current war and preparing for the next possible crisis, the Marine Corps must continue to reset our forces. Costs categorized as "reset" meet one of the following criteria: maintenance and supply activities that

restore and enhance combat capability to unit and prepositioned equipment; replace or repair equipment destroyed, damaged, stressed, or worn out beyond economic repair; and enhance capabilities, where applicable, with the most up-to-date technology industry can provide.

As the Marine Corps moves forward with reset and reconstitution of the force, we must ensure we retain the lessons learned from the last seven years of fighting. We must provide modern ground equipment that appropriately balances payload, performance and protection as we reset. Our reset must account for the evolving threat we face today. Congressional support of resetting the Marine Corps has been outstanding. Thus far, Congress has provided over $12 billion toward reset. On behalf of all Marines and their families, thank you for providing this funding which helps ensure Marines have the equipment they need to properly train for and conduct combat operations. We continue to evaluate and refine current and future reset projections as missions, equipment in theater, and operating tempos change. Our current estimate of over $8 billion includes Fiscal Year 2009 and the future retrograde of assets as our presence overseas diminishes.

Principle End Item Rotation. As part of the reset process, the Marine Corps has created a retrograde process that inspects all equipment as it is being retrograded from the Central Command Area of Operations. After inspection, equipment will be assessed for replacement, repair, or depot work to fill existing equipment shortfalls. Equipment being replaced or sent to depot will be modernized through the insertion of technology or replaced with more modern variants. Retrograded equipment designated for repair and modernization is sent to the Maintenance Depots at Albany, GA and Barstow, CA to support master work schedule modernization and rebuild actions. To date, over approximately 24,000 principle end items have

been retrograded to Blount Island Command for repair, disposal, or redistribution actions as appropriate.

Closing

We face an adaptive enemy. Our ground equipment must both protect Marines and make them more effective as war fighters. We are doing everything we can to ensure our ground equipment supports Marines in the field. With the support of the Congress, the American people, and industry we can ensure our Marines are ready for the current fight as well as the uncertain future. We owe our best effort to those young men and women who answered the Nation's call. Supporting them is a moral imperative, and a responsibility we take very seriously. Again, I thank you for the opportunity to report on their behalf.

REMARKS OF MR. MURTHA

Mr. MURTHA. There are a couple of programs that worry us. Out in the field the troops are concerned about how heavy the armor is; body armor I am talking about. And, of course, we worry about the size and the weight of the vehicles, because getting them to wherever we are going to go. But we are fighting a war 8,000 miles away, so we have got to get the equipment and the troops there. And the complaints I hear in the field are the deployments over and over again and the fact that the troops have what they consider equipment that is too heavy. But this particular EFV, flat bottom, aluminum bottom, worries us.

I know you took over the command, and you are going to give us some guidelines, and we need some recommendations of how we can follow research and development better. We have been remiss ourselves in spending $4 billion. It seems to me we should have caught this earlier, and I know you have revised it. I saw an article where you turned the corner. But the problem is it costs a lot of money to turn the corner for 600 vehicles which will cost approximately $20 million apiece. So we have got some real problems here, but working with you, we hope that we can get this thing in the right direction.

And I mentioned to you earlier, let's look at alternatives. For instance, most of this is not going to be spent in the water; most of it is going to be spent on land. And that is why the vulnerability is so important, and that is why I worry about the flat bottom, aluminum bottom so much. But we know we can work it out. I know when General Gray came here as a Commandant, he said, just give us as much as you can, we will work it out. Well, this program has gone a little bit more than "as much as you can."

Mr. Young.

PERFORMANCE SPECIFICATIONS

Mr. YOUNG. Mr. Chairman, one of the first questions that comes to my mind is why are you able to reduce your requirement for the EFV from over 1,000 vehicles to just under 600?

General FLYNN. Congressman Young, the reason why we are able to do that is because we have taken a comprehensive look at our ground vehicle strategy, and what we have tried to do is we tried to build a flexible strategy that just had about the minimum amount of capability that we needed to do the operations that we are expected to execute either today or in the future. Key components of that strategy are the Expeditionary Fighting Vehicle, the Up-Armored Humvees, the Joint Light Tactical Vehicle (EFV), the Marine Personnel Carrier and also the Internal Transportable Vehicle. Those have all been sized not so much to give you three Marine Expeditionary Forces' (MEFs') worth of capability, but to give you sufficient capability to respond to operations from the various combatant commanders. And that is how we have been able to do it. The EFV program has been reduced to provide us with two brigades' worth of forcible entry lift, sir.

Mr. YOUNG. Will the requirement be filled by other vehicles that are either in development or that you are planning to develop?

General FLYNN. Yes, sir. The rest of the capabilities will come from the Joint Light Tactical Vehicle (JLTV), which has just started the technology demonstration phase, and that will go on for about 24 to 27 months. We will continue to upgrade our Humvees that we have right now, our Up-Armored Humvees, and we will also take advantage of technology to try to make them lighter along the way. There are some promising things out there that we are looking at to make the vehicle lighter. We are also looking, in conjunction with the Army, at an all-terrain-type Mine Resistant Ambush Protected (MRAP) vehicle, and at the same time we are also increasing our capabilities. Our Logistics Vehicle Systems (LVSs) are going to be replaced by the logistics—a new variant of the logistics vehicle. And we are also going to be upgrading some of our Medium Tactical Vehicle Replacements (MTVRs) as well, sir.

So it is a holistic strategy that is designed to provide a variety of capabilities at the right level, maybe not for every MEF to have the same level, but a reservoir that we could do balanced operations across a wide spectrum of operations, sir.

Mr. YOUNG. General, let me go to the EFV. And I am wondering, are you expecting too much out of that vehicle? I understand that it is a flat-bottom aluminum hull that is basically meant to bring the Marines onshore with the possibility of bolting armor on the bottom of it once the marines reach the beach. Is that practical?

General FLYNN. Sir, this goes to the issue of having balanced capability. One of the things as a sea-based force that we have to be concerned with is our ability to also operate from amphibious shipping. And one of the things that General Conway has given me marching orders on is to find ways to lighten the weight of the Marine Air-Ground Task Force. Part of our ability to do that, we will be able to take a look at what missions we are going to have to perform and be able to, if you will, scale the armor on our vehicles based on the threat and the operating area where these vehicles are likely to operate. It is not meant for you to take an operational pause in operations. There are a whole number of ways that we protect our Marines as we accomplish our mission, and one of those ways would not be to stop in the middle of operations to bolt on your armor. But it is going to be a consideration in your planning and in your load planning.

One of the things I am concerned about, sir, is the weight of our vehicles and where we are going. We could become too heavy to come from the sea. And everything we are seeing in the future is that we are going to have to have that capability, and we are going to have to look at technology, we are going to have to look at science to tell us how to lighten that vehicle. And one of the simple ways of doing it right now is having the capability to bolt on and bolt off armor.

Mr. YOUNG. General, explain to me—we have the Landing Craft Air Cushion (LCAC), which is supposedly what I have—I think we have all been on it, so we know that it moves quickly, it is fast, it will come up over the beach. It will go inland until there is some kind of a barrier that stops it. What is the difference in the projected use of the EFV versus the LCAC?

General FLYNN. Sir, the LCAC, first of all, unarmored coming in. You then would have to land at the beach, stop, offload your fight-

ing vehicles. And in the face of an opposed landing, you would be at a disadvantage there. So it is not armored. And when we have looked at the operational constraints on it, it really doesn't work for us.

The EFV, you know, hits the beach and continues fighting inland. Again, the EFV is one tool in the kit. We are looking at alternatives, as the Chairman suggested. We will continue to look at alternatives to see what makes operational sense. But our initial look at the LCAC option, sir, was that it was not practical at this time, sir.

Mr. YOUNG. The EFV would be carried in the same type of ship that carries the LCAC?

General FLYNN. Yes, sir. The EFV would be carried in an amphibious ship, but then we would have to preload the different spaces and the different load plans on the amphibious ships, which you are very familiar with. It does change that load plan significantly, sir. And it does change the capability, our ability to build combat power ashore quickly, sir. It does change the way that we do things. And based on our initial operational look on it, it wasn't feasible with an unarmored like LCAC. So right now we don't have an armored LCAC under development, sir, but like I said, all options are being looked at, sir.

Mr. YOUNG. General, thank you very much. I look forward to the rest of your testimony.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Bishop.

EXPEDITIONARY FIGHTING VEHICLE (EFV)

Mr. BISHOP. Sir, we have been tasked with looking very, very, very closely at all of our weapons systems and determining what, if any, are not the most efficient use of taxpayers' dollars, while at the same time maintaining our mission of the most effective weapons for our men and women who are in harm's way. And, of course, it is very difficult, and it is a tough job. Some tough decisions are going to have to be made. And this particular project, the EFV, seems not to be proving cost-effective based upon the amount of time, the dollars and the effective outcomes.

Several liabilities have been demonstrated. Most prominent to me is the fact that once it has landed, about to embark upon a landing, it is 90 seconds of time when you have got marines that are packed in with all of their equipment that they actually are immobile and sitting ducks, and to the extent that that exposes them, that is a problem.

You also have the difficulty in being able to justify continuing to spend the dollars on this when right now it is not meeting all of the expectations that we have.

And so my concern is why shouldn't we consider eliminating or looking at cutting back on this particular weapons system? How much is it costing us per year?

General FLYNN. Sir, there are a number of questions that you asked. As the EFV transitions from planning where it is going about 25 to over 25 knots inshore, it has to transition to get the track back down. It continues to move forward at roughly the same speed that the current Amphibious Assault Vehicle (AAV) does,

and then it can engage to continue to come ashore. So there isn't an operational pause.

Mr. BISHOP. Don't you have to bolt on the armor?

General FLYNN. No, sir. That would be a situational dependent on the armor protection for the EFV. Right now the underbelly protection on the EFV is the same as that of a Stryker. So based on the mission that we would be using, the protection of the EFV and that type of situation would come from the speed of the EFV, and better tactics, better training of our marines and procedures. There is protection in mobility all by itself.

Mr. BISHOP. Maybe I misunderstood. I thought that I understood that the bottom of it was aluminum.

General FLYNN. Yes, sir. It is a flat hull.

Mr. BISHOP. It does not have sufficient strength or heavy enough armor initially without the extra bolt that—bottom on to withstand the Improvised Explosive Devices (IEDs) and certainly the Explosive Formed Projectiles (EFPs).

General FLYNN. Again, the idea would be in your tactics to avoid the IEDs and EFPs and be able to move forward. The EFV is not designed to perform a role, say, that you see the MRAP performing in Operation Iraqi Freedom (OIF) right now. We will not use it for that.

The other part of your question that you asked is why are we doing multiple types of vehicles is because we are trying to create a family of capabilities to have capabilities in a wide range of environments.

On the performance of the program, sir, I can't justify the previous performance of the program. When it went through its recent certification in 2007, one of the things that came out of that requirement was we came up with five knowledge points where that the program has to perform. If at any point in one of those five knowledge points it does not perform, you know, they are called off-ramps for a reason. And we have those five performance knowledge points right now. It just passed its first knowledge point, and it is being monitored very closely, as the Chairman mentioned, to make sure that we continue to do that, sir.

Mr. MURTHA. The time of the gentleman has expired.

Mr. Frelinghuysen.

WEIGHT OF EXPEDITIONARY FIGHTING VEHICLE

Mr. FRELINGHUYSEN. I am afraid many of our questions are Expeditionary Fighting Vehicle-centric here. First of all, obviously the Marines are like a favored nation. We would like to give you whatever punch you need. I was out to take a ride in one of these vehicles about 3 years ago. I think it was then Colonel Brogan, and now it is General Brogan. A lot of enthusiasm.

How much does it weigh right now, the EFV?

General FLYNN. Sir, I think the weight of the vehicle is about 50 tons, I believe, sir.

Mr. FRELINGHUYSEN. The weight concerns me just as a lay person. It is remarkable that you could have something that goes into the water, comes out and could be a land vehicle. You put 17 Marines in the back of it; isn't that what the game plan is?

General FLYNN. Yes, sir.

Mr. FRELINGHUYSEN. With all their gear, how much is that? How much weight does that add to it?

General FLYNN. Sir, every combat Marine carries about 100 pounds of gear, 80 to 100 pounds.

Mr. FRELINGHUYSEN. A lot of gear.

The issue here, if you have bad weather, I mean, we were out there, and I am sure they wouldn't have taken us out unless the weather was fairly mild. I mean, I wondered whether we would ever come up—I won't say for air, but it wasn't rough seas, and, you know, there is a lot of weight in that vehicle. If we are 50 or 60 miles offshore, let's say off Korea somewhere, you know, who has done the homework in terms of its, let's say, survivability in bad weather? Can you talk a little bit about that?

General FLYNN. Sir, all of the——

Mr. FRELINGHUYSEN. I think it is a neat idea, and I am supportive of it, but I am concerned about the weight and, you know, just the view of maybe this could be sort of a sitting duck out there.

General FLYNN. Sir, the vehicle has the survivability to launch from over the horizon and to get safely to the shore. We have plenty of experience doing amphibious operations and launching even——

Mr. FRELINGHUYSEN. The history of the Marines in terms of amphibious, I think, is remarkable. But, I mean, with this new fighting vehicle, 50 miles from shore in bad weather——

General FLYNN. Sir, those are the considerations that an operational commander would have to take into account on the timing of the operation. They have existed forever, and they will continue to exist. And that is one of the things that commanders decide is what risk they can take. But the vehicle is capable to launch from over the horizon and to get safely ashore, sir. There is no doubt in my mind about that capability, sir.

Mr. FRELINGHUYSEN. Okay. Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Hinchey.

JOINT LIGHT TACTICAL VEHICLE (JLTV)

Mr. HINCHEY. Thank you, Mr. Chairman.

General, thank you very much. I am sorry I got here a little bit late. I wasn't able to hear the things that you opened up with.

I was wondering, however, about the situation in Afghanistan, which is likely to be different than the situation in Iraq, and the fact that the President is moving 17,000 additional troops over there, particularly marines. And I am wondering whether about the JLTV, this new vehicle, and how likely that is to be useful, perhaps more useful than other vehicles, particularly in the circumstances that we have to deal with in Afghanistan. And I was wondering what you might think about that and if it is something that we should focus attention on, what we might do successfully to move it forward as quickly and effectively as possible.

General FLYNN. Sir, we are excited about the JLTV within the Marine Corps. For all the reasons that some of the Members have already said, we would like to get lighter. And we see in the JLTV the possibility based on what we think is possible with technology to get a vehicle that is more mobile and is lighter.

One of the things that attracts us to why we are trying to keep the JLTV within weight parameters is we want it to be helicopter transportable with the ability of—to be able to go where the enemy may not think you are capable of going. Plus the ability of a lighter vehicle allows us more flexibility on being able to load on ship, and also there is a degree of mobility that comes on the ground by just being lighter and having the ability to go into areas where we may not have the right trafficability.

So the current status of the program is it has just started its technology demonstration phase. I think there are three variants that are being done by three different companies. And what we are doing is we are going to see what comes out of that technology demonstration phase, sir, and our key thing that we are pushing for is we need the vehicle to remain light. And we need it to be mobile both on the ground and also transportable from the sea and from the air.

Mr. HINCHEY. I have been spoken to by some company that is in the process of developing a security material which is much lighter, but apparently much stronger, to surface around the bottom or elsewhere on vehicles like this. It is amazingly light, but very, very strong. Is that something that makes sense particularly for the LTV?

General FLYNN. Sir, any material that is a leap ahead in technology that makes us lighter is something that we would be interested in. And we are seeing a lot of things that come out of science to offer potential to be lighter and at the same time get the same level of protection.

Mr. HINCHEY. So this is something that is getting attention and——

General FLYNN. Yes, sir. We are always looking at new materials through our research labs, and our R&D efforts are to get lighter.

Mr. HINCHEY. General, thank you very much.

Mr. MURTHA. Mr. Kingston.

ACQUISITION LESSONS

Mr. KINGSTON. Thank you, Mr. Chairman.

General, I wanted to talk to you about the MRAPs, and we had recently heard from the inspector general's report on—basically it was Defense-wide procurement problems. But he had focused in on the Marine Corps and the MRAP purchasing and just kind of bouncing around said that contracting officers, officials used inappropriate contract approaches, ignored acquisition regulations, used ineffective pricing tools resulting in prices that could not have been determined to be fair or reasonable. The Marines did not use the Truth in Negotiations Act to obtain costs or pricing data to ensure fair and reasonable price, thus concluding that the contracting officials did not adequately evaluate prices during the source selection, resulting in the Marine Corps having no assurances that prices paid were fair and reasonable, and likely paid more than it should have for the vehicles. The IG estimated that for one contractor, there was about $45 million in lost potential savings because of the failure to obtain volume discounts. I am sure you are familiar with that.

But those are some of the things that we had from that hearing. And I was wondering, first of all, it is just so disappointing to think that that would happen. So I would like to know, how did it happen, in your estimation? And then, what are you doing about it? And, you know, I mean, I have been in Washington for a while, and government agencies are always telling you what they are going to do about something. And if what they are going to do about things were all done, then none of these testimonies would have happened.

So I guess my bigger question is I would rather look back than hear the forward, because I have heard the forward so many times. And as Mr. Frelinghuysen says, everybody in this Committee is very, very pro-Marine. So it is even a little bit more disappointing to think that this would happen to you guys. But it certainly did happen, and, in my opinion, it was a very scathing report. So tell me your side of the story. And I will yield.

General FLYNN. Sir, I am not a procurement specialist. I am the requirements guy. And I have read the report. And I will tell you this: The MRAP, we were the lead. The Marine Corps was the lead procurement agency for the entire Department of Defense. And what we were trying to do was in a very short period of time meet the needs of the warfighter, both Soldiers and Marines and Sailors and Airmen, on the ground in Iraq. We went out to, I think, initially 10 companies and asked them to provide prototypes that were immediately thrust into testing, and we went and got best of breed. And based on who could produce what, contracts were awarded.

I am not taking exception to the report, sir. There is some disagreement that I could give you additional information for the record as to what we agree with and what we don't agree with in the report. But one of the things with an IG report, there are always lessons learned, sir. This was a unique procurement program that did deliver, I think, in almost record period of time. And there are lessons to be learned from that, and we have taken those lessons to heart, and you will see that we will apply those lessons to future activities.

But this was, I very much believe, a unique effort, sir, that did deliver capability pretty quick. And could it have been done better, sir? I am not going to argue with that. It could have. But we have learned from that, sir, and we will make it better in the future.

Mr. KINGSTON. The IG report did say that you did do everything very, very quickly, which was maybe the first call-in on this, and perhaps some of the dollars that were lost were made up for in lives that were saved, because I know that we in Washington were very excited about MRAPs, and everybody was pushing for them.

General FLYNN. As you know, sir, there were many models and many companies to produce that, and there was the ability to get the industrial base to produce as many vehicles and three different variants of those vehicles as quickly as possible, sir.

Mr. KINGSTON. Well, thank you, General.

[CLERK'S NOTE.—Information provided to Mr. Kingston.]

UNITED STATES MARINE CORPS
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380-0001

The Honorable Jack Kingston
Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Kingston:

During the March 10, 2009 hearing on Marine Corps' Ground Equipment, you asked that I provide some information on the Marine Corps' position on the Procurement and Delivery of Joint Service Mine Resistant Armor Protected (MRAP) Vehicles DoD IG Report—29 January 2009 (Report No. D-2009-046). I believe the enclosed information paper provides the necessary background and rational for the Marine Corps' position.

Thank you for your continued interest and this opportunity to address this very important issue.

Sincerely,

George J. Flynn
Lieutenant General, U.S. Marine Corps
Deputy Commandant, Combat Development and Integration

Copy to:
The Honorable John Murtha, Chairman
The Honorable C. W. Bill Young, Ranking Member

17 March 09

INFORMATION PAPER

Subject: USMC POSITION ON DOD IG REPORT DATED 29 JANUARY 2009 (REPORT NO. D-2009-046) PROCUREMENT AND DELIVERY OF JOINT SERVICE MINE RESISTANT ARMOR PROTECTED (MRAP) VEHICLES

1. **Purpose.** CMC Congressional Testimony Preparation.

2. **Take Away.** Both the ASN(RDA) and the Marine Corps provided written comments to the DoD IG report and disagreed with a number of assertions in Finding C.

3. **Key Points**

The Marine Corps agrees with the following:

Finding A. Actions Taken to Accelerate Mine Resistant Ambush Protected Vehicle Delivery

- DoD IG concluded that the combination of actions executed to address the urgent need for accelerating the delivery of MRAP vehicles to theater was innovative and effective.

- The DoD IG found that Marine Corps System Command (MCSC) implemented aggressive contractual delivery schedules to meet the theater demand for MRAP vehicles as directed by the Secretary of Defense.

Recommendations

- The Marine Corps has incorporated the DoD IG report recommendation that future procurements for MRAP vehicles are properly competed or justified on a sole-source basis. Our acquisition strategies included this consideration for the MRAP II and sole-source award of MRAP CAT III procurements. MRAP-All Terrain Vehicle (M-ATV) prices for each part of the competition will be negotiated separately.

- MCSC has communicated to its contracting officials the importance of making price reasonableness determinations and ensuring cost or pricing data are requested. MCSC is building a framework for the price reasonableness determination that will be used for the M-ATV procurement. This procurement, though part of the overall Joint MRAP Vehicle Program, is being conducted by the U.S. Army Tank-Automotive and Armaments Command (TACOM).

- We will attempt to build sufficient flexibility into the production contract to deal with both planned and potential quantities. We also sought both step and cumulative quantity discounts as part of the Request for Proposals for the M-ATV procurement. An OSD Peer Review was conducted before the request for proposal (RFP) release, and a second Peer Review is being conducted during M-ATV source selection.

The Marine Corps disagreed with the following:

Finding C. Price Reasonableness Determination

- We disagree with the DoD IG report conclusion that the MCSC contracting officer chose an inappropriate contract type for the MRAP procurement. The Director of the Defense Procurement Acquisition Policy and Strategic Sourcing (DPAP), also agreed that firm fixed price was the correct contract type. He stated "The use of firm fixed price contracts would be perfectly appropriate if buttressed with the appropriate analysis to determine fair and reasonable prices." We believe our approach, vetted with OSD, was appropriate. We believe that the contracting officer reasonably determined that a fixed-price contract was appropriate for the MRAP procurement.

- We believe that MCSC netted actual savings of $127 million by negotiating bi-lateral contract modifications to produce more than the 1,500 vehicles that were originally contracted for in the base year. We purchased those vehicles at base-year price rather than option-year pricing. The difference between ordering at base-year rather and option-year pricing of 4,186 vehicles was $127 million. We understand the approach suggested by DoD IG. The DoD IG method suggests potential savings of $45.6 million by using volume discounts. We should have asked for an additional volume discount. We do not believe we would have received both discounts. We believe our method was a better investment for the government, as reflected in net actual savings of $127 million verses a hypothetical savings of $45.6 million.

- We believe the price range in the chart on page 25 is misleading. In January 2007, nine vendor proposals demonstrated potential to meet the program's overarching objective – field the maximum number of survivable, safe, sustainable MRAP vehicles in the shortest period of time – received contract awards to each deliver two CAT I and two CAT II for initial test and evaluation. We believed from the onset that "some" of the vehicles may not pass production verification and survivability tests, but we could not tell that definitively from the paper proposals. For that reason, it was decided that leaving any high potential producer that "could possibly" manufacture a survivable vehicle on the sidelines was an unacceptable risk when the Joint Forces had an urgent need for these vehicles.

  Of the nine vendors, Oshkosh Truck (OTC), at $306,199, was the least expensive, but failed Limited User Evaluation (LUE); General Purpose Vehicles (GPV) was the most expensive at more than $1 million per vehicle, but was terminated for convenience because the company failed to deliver any test vehicles. GPV's paper proposal offered an enhanced maneuverability and mobility solution (the only vendor to offer this capability). GPV's contract award was terminated, and the entire $5.1 million was de-obligated. The unit prices on page 25 reflect unit pricing for a procurement order quantity of 1 to 200 vehicles. Approximately 95% of the MRAP vehicles actually procured were purchased at higher step ladder quantity pricing where unit price ranges did not range so greatly among the vendors.

- As of 16 March 09, MCSC has ordered 16,242 vehicles to meet DoD requirements. Of the five vendors that produced significant quantities of vehicles, the top vehicle unit price paid by the Government was $629,800 (for 75 vehicles); the lowest was $443,000, representing an average base variant cost of $507,860 with an average unit price variance across vendors of $112,891.*

  **The actual average cost of a CAT I = $507,728; the actual average cost of a CAT II = $508,472*

- Ultimately, MCSC ordered large quantities of CAT I and CAT II vehicles from five fully qualified vendors. These manufacturers proved their ability to produce vehicles with the required production numbers and to deliver within established timelines.

Mr. MURTHA. Ms. Kilpatrick.

READINESS

Ms. KILPATRICK. Thank you, Mr. Chairman.

General, it is good to see you again. Thank you for your help in getting me ready for understanding what we do here.

I noticed by your testimony, you are calling it the Marine Corps ground equipment. My question, having heard some of my illustrious colleagues talk to you about the readiness of our Marine Corps—and I like the multitype vehicles that you use. EFV is what I have been reading about the last few hours, 24 hours or so. Two questions: Is the Marine Corps ground equipment ready, capable, up to par as we move into this new conflict? And not new, but Afghanistan, as we are moving out of Iraq into Afghanistan? Is the multitype vehicles, including the EFV and the—I was in Stryker, by the way. I went to see Stryker in Michigan a couple weeks ago and was there and found—you mentioned it this morning in terms of part of this multifleet that you have. How does it compare to the EFV? And are we ready in general as we move forward out of Iraq into Afghanistan with this terrain and all that goes with that?

General FLYNN. Ma'am, one of the things that we are doing based on the support over the years that we have received from the committee is we have been resetting the force. We have been recapitalizing our equipment. Right now what we are doing is we have our feet in two canoes almost. And what we are doing is we are preparing the equipment that is coming out of Iraq, and we are taking equipment out of storage in the United States and sending that to Afghanistan. And then we will take the equipment from Iraq and put it through our maintenance depots, and we will also do some triage on the equipment when it is coming out of theater. So we have a pretty detailed, solid plan to make sure that we maintain readiness through this transition and to also reset the force where possible.

Basic difference between an EFV and a Stryker is one is a track vehicle designed to be able to also swim in from 25 to 40 miles off the coast. Stryker is a wheeled vehicle, and it doesn't have that capability. They have similar capabilities in terms of mobility. But again, we are looking for both type vehicles in our inventory. We are looking for the EFV, and we are also looking for a Marine Personnel Carrier, one of the vehicles that has a lot of similar characteristics to what a Stryker has.

Ms. KILPATRICK. And will we meet this kind of R&D for the EFV? I mean, are we going to make it? I know they are back end.

General FLYNN. Ma'am, right now what has happened with the EFV, it has gone through its first knowledge point right now a couple of months ago, and it performed better than the requirement. We were looking for 43.5 hours between failures and we predict 61 hours. We have other knowledge points coming up that are required for the program to meet. At the same time, components now are actually undergoing testing now, heat, vibration testings, to make sure that when we put the prototypes together, that we are not going to be surprised by any issues with components. So we have the message of the importance of monitoring the performance of the program while it goes through this critical phase.

Ms. KILPATRICK. And then finally, Lima, Ohio, is where you make the EFV. You also make the Stryker there. I am from Michigan. We are hurting bad. When you get it right, we want you to also make it in Michigan. Thank you.

Thank you, Mr. Chairman.

MARINE HELICOPTER

Mr. MURTHA. Well, I appreciate the indulgence of the Committee. As I said, I wanted to be out of here as soon as we could today.

But let me just caution General Flynn, I went out to visit the armed helicopter last year, and when I came back, I sent the staff out, and we cut it in half. Even though we have a member of the Committee that is from that area, we felt it couldn't carry the weight. It was already excessive weight for the engine. They paid no attention to what I said. The Army agreed with me, and we eliminated the program.

Helicopter One. Long before anybody else said anything, this Committee said, we cut $200 million. We are not going to spend that kind of money, the requirements the Secret Service put on that helicopter. And so we cut $200 million out of that program.

This program is on the bubble as far as I am concerned, General. I mean, this program, we spent $4 billion. And I am prepared to recommend to the subcommittee that we continue the program with your assurance that you are going to give us some responsible recommendations about what is happening and guidelines about what is happening as it goes down the road. And you are going to look at alternatives. And this is so important, the alternatives to this vehicle. You know, $4 billion we spent. The rest of the money we spend—if we have spent it, it would be $20 million per vehicle. I think some changes need to be made in it. And on the other hand, you are the guy that is going to run the program. You are going to make the requirements.

But I have a great concern about this program going forward. I know the Commandant personally is taking an interest in it, and that reassures me that we will be able to recommend that it go forward and spend a little more research money this year as you give us quarterly reports about how the program is going. So I appreciate your indulgence and look forward to trying to work out these programs with you for the rest of the year.

Any questions, Bill?

INTERNALLY TRANSPORTABLE VEHICLE

Mr. YOUNG. I guess I have one quick question. On the Internally Transportable Vehicle (ITV), General, the overcost has been very, very substantial. Can you tell us why?

General FLYNN. Sir, I would like to answer that question for the record for you if I could, sir. I couldn't give you that answer right now, sir.

Mr. YOUNG. Okay.

General FLYNN. And I would like to answer it for the record for you, sir, to make sure I have it correct.

Mr. YOUNG. Okay. The reason I asked the question, the average cost for the ITV has risen from $94,000 to $209,000 for the vehicle, and if you add the mobile ammunition trailer, it has risen from

$579,000 to over $1 million. So this gets my attention. So if you could provide us some information on that, I would appreciate it. Thank you.

General FLYNN. Sir, I will, sir. Thank you.

[The information follows:]

UNITED STATES MARINE CORPS
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380-0001

The Honorable C. W. Bill Young
Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Young:

During the March 10, 2009 hearing on Marine Corps' Ground Equipment, you asked that I provide some information on the Growler Internally Transportable Vehicle. I believe the enclosed information paper provides the necessary background and rationale for the current cost of the Growler Internally Transportable Vehicle.

Thank you for your continued interest and this opportunity to address this very important issue.

Sincerely,

George J. Flynn
Lieutenant General, U.S. Marine Corps
Deputy Commandant, Combat Development and Integration

Copy to:
The Honorable John Murtha, Chairman

Unclassified – For Official Use Only

16 Mar 09

INFORMATION PAPER

Subject: Questions for the Record (QFRs) from HAC-D Ground Equipment Readiness Hearing on 10 Mar

1. Purpose. To respond to Representative C.W. Bill Young's (R-10th/FL) question, "The average cost of a single Growler has risen 120 percent, from about $94,000 when the contract was awarded in 2004 to $209,000 in 2008. The unit cost for the vehicle with mortar and ammunition trailer has grown 86 percent, from $579,000 to $1,078,000. If you could provide us some information on that, I would appreciate it."

2. Answer. In 2004, the projected cost of an Internally Transportable Vehicle (to be built with older design M-151 type components) was $94,000. We have added many changes to improve transportability in the V-22, ground mobility, reliability, overall performance and safety. ITV improvements that contribute to a higher cost today include:

- Power steering and brakes for safety and to combat driver fatigue.
- Height adjustable air ride suspension to improve internal V-22 transport and mobility, along with replacement of all suspension components with much stronger and better performing items.
- Higher capacity transmission and cooling system to increase load carrying capacity in extreme hot weather, at altitude and in steep or sandy terrain and a cold weather package to allow for use at high altitudes or in extreme cold.
- Replacement of original drive train (transfer case, differentials, drive-shafts, half-shafts and hub assemblies to increase load carrying, safety and reliability.
- Addition of a communications support package including mounts, amplifiers and antennas.
- Armored and limited blast attenuating seats to improve survivability.
- Extremely lightweight collapsible ring mount as requested by the users.
- Addition of a fourth seat (required significant re-design) to support added requirements for Enhanced Company Operations (ECO).
- Many additional performance, safety and durability changes developed during 3 1/2 years of rigorous developmental and operational testing. All components are now current automotive standard for this type of vehicle.

Mr. MURTHA. Ms. Kaptur, we are trying to adjourn the Committee.

Ms. KAPTUR. Go right ahead, Mr. Chairman.

Mr. MURTHA. Mr. Visclosky, unless you have some questions, we are going to adjourn the Committee.

Mr. VISCLOSKY. I am fine, Mr. Chairman.

Mr. MURTHA. Thank you very much. The Committee will adjourn until tomorrow at 10 a.m. Thank you very much.

General FLYNN. Thank you, sir.

[CLERK'S NOTE.—Questions submitted by Mr. Murtha and the answers thereto follow:]

CONTRACTING MRAPS

Question. Congress has appropriated over $22 billion for procurement of MRAPs DoD-wide. These funds were made available to respond to a critical need—and did so.

However, a Department of Defense Inspector General report, (dated 26 Feb 2009) states that contracting officials used inappropriate contracting approaches, ignored acquisition regulations, or used ineffective pricing tools resulting in prices that could not always be determined to be fair and reasonable.

The IG did compliment the Marine Corps because they took effective actions to accelerate delivery of MRAP vehicles and addressed material shortfalls. In addition, the Army and Marine Corps developed MRAP requirements based on theatre commander assessments.

The IG report on the Procurement and Delivery of Joint Service Armor Protected Vehicles, found that the Marine Corps Systems Command did not properly determine that contract prices were fair and reasonable when they awarded nine firm fixed price contracts for Mine Resistant Ambush Protected (MRAP) vehicles. As of June 30, 2008, the contracts were valued at $9.1 billion. Contracting officials relied on competition as the basis for price reasonableness even though the awards were made for dissimilar vehicles with a wide range of prices.

Generals, is this true? Were common procurement practices vitiated in order to speed the process?

Answer. While expediency is a hallmark trait of the MRAP program, all necessary procurement and acquisition procedures were considered and utilized. The mode for achieving the speed and effectiveness of placing MRAPs in the hands of the warfighter was to run many processes in a compressed and simultaneous manner. At no point did we ever consider that our approaches made any of the steps ineffective or invalidated in any manner the required federal, DoD, and service-unique acquisition regulations and policies.

Question. If so, have your services done an analysis of cost savings that might have been realized? For example, for Category I vehicles, the prices ranged from $306,000 to $1,089,000. The current lead contracting officer could not explain how the price and evaluation team concluded that prices were fair and reasonable.

Answer. We believe the price range in the DoD IG report on page 25 is misleading. In January 2007, nine vendor proposals demonstrated potential to meet the program's overarching objective, which was to field the maximum number of survivable, safe, sustainable MRAP vehicles in the shortest period of time. Contracts were awarded to each vendor to deliver two CAT I and two CAT II vehicles for initial test and evaluation. We believed from the onset that "some" of the vehicles may not pass production verification and survivability tests, but we could not tell that definitively from the paper proposals. For that reason, it was decided that leaving any high potential producer that "could possibly" manufacture a survivable vehicle on the sidelines was an unacceptable risk when the Joint Forces had an urgent need for these vehicles.

Of the nine vendors, Oshkosh Truck (OTC), at $306,199, was the least expensive, but failed Limited User Evaluation (LUE); General Purpose Vehicles (GPV) was the most expensive at more than $1 million per vehicle, but was terminated for convenience because the company failed to deliver any test vehicles. GPV's paper proposal offered an enhanced maneuverability and mobility solution (the only vendor to offer this capability). GPV's contract award was terminated, and the entire $5.1 million was de-obligated. The unit prices on page 25 of the report reflect unit pricing for a procurement order quantity of 1 to 200 vehicles. Approximately 95% of the MRAP

vehicles actually procured were purchased at higher step ladder quantity pricing where unit price ranges did not range so greatly among the vendors.

Question. According to the IG, "For $1.2 billion of non-vehicle items, (the IG) found no corresponding independent government cost estimates for evaluation. The Marine Corps also did not obtain volume pricing discounts from two contractors for orders in excess of 1,500 vehicles." Can you respond to this?

Answer. We believe that MCSC netted actual savings of $127 million by negotiating bilateral contract modifications to produce more than the 1,500 vehicles that were originally contracted for in the base year. We purchased those vehicles at base-year price rather than option-year pricing. The difference between ordering at base-year rather and option-year pricing of 4,186 vehicles was $127 million. We understand the approach suggested by DoD IG. The DoD IG method suggests potential savings of $45.6 million by using volume discounts. We do not believe we would have received both discounts. We believe our method was a better investment for the government, as reflected in net actual savings of $127 million versus a hypothetical savings of $45.6 million.

Question. General, have actions been taken to identify why this happened, who is responsible, and how to preclude this from happening in the future?

Answer. The Marine Corps has incorporated the DoD IG report recommendation that future procurements for MRAP vehicles are properly competed or justified on a sole-source basis. Our acquisition strategies included this consideration for the MRAP II and sole-source award of MRAP CAT III procurements. MRAP-All Terrain Vehicle (M-ATV) prices for each part of the competition will be negotiated separately.

MCSC has communicated to its contracting officials the importance of making price reasonableness determinations and ensuring cost or pricing data are requested. MCSC is building a framework for the price reasonableness determination that will be used for the M-ATV procurement. This procurement, though part of the overall Joint MRAP Vehicle Program, is being conducted by the U.S. Army Tank-Automotive and Armaments Command (TACOM).

We have attempted to build sufficient flexibility into the production contract to deal with both planned and potential quantities. We also sought both step and cumulative quantity discounts as part of the Request for Proposals for the M-ATV procurement. An OSD Peer Review was conducted before the request for proposal (RFP) release, and a second Peer Review is being conducted during M-ATV source selection.

JOINT LIGHT TACTICAL VEHICLE (JLTV)

Question. Since the initiation of the JLTV program, the military departments have procured over 16,000 Mine Resistant, Ambush Protected (MRAP) vehicles. Now, the MRAP Joint Program office is in the process of procuring 400 light variants of the MRAP for duty in Afghanistan, and a more mobile MRAP All Terrain Vehicle (M-ATV) is being considered. Still, the JLTV program—a quite similar vehicle, is still under development.

Given the similar requirement and specifications for the M-ATV and the JLTV—combined with the immediate need for mine resistant protected vehicles in Afghanistan, is it necessary for BOTH of these programs to continue?

Answer. The M-ATV program will rapidly procure, in 2009–10, vehicles to meet the combatant commander's immediate requirement to overcome the mobility deficiency of previous versions of MRAP in Afghanistan and to provide a more robustly armored vehicle than the Up-armored HMMWVs. The narrow set of requirements that define M-ATV are focused on armor protection and increased off-road mobility in the Afghanistan terrain. The requirements do not take into account limitations posed by shipboard or tactical aviation transportability requirements. The requirements that define the Joint Light Tactical Vehicle (JLTV) program are heavily influenced by lessons learned from the MRAP program. The JLTV program is currently in the technology development phase of the acquisition process where vehicle prototypes and requirements will be evaluated, assessed and adjusted for the purpose of controlling risk and unneeded cost growth. Unlike the narrow focus of the MRAP program, JLTV seeks to achieve an appropriate balance of protection, payload, and performance (mobility and transportability) to support Joint warfighter requirements across the range of military operations and in a wider variety of operational environments and terrain.

Question. Could you describe where each of these programs are in terms of development?

Answer. JLTV—The Defense Acquisition Executive (DAE) approved the Milestone A Decision in December 2007. A Request for Proposals was released in February

2008 and three contracts were awarded in October 2008 to Lockheed Martin/BAE, GTV (Joint Venture between GDLS & AMG) and BAE/International Navistar, which was followed by protests submitted to the GAO on behalf of Northrop Grumman and Textron. The protests were recently denied and the program started the 27 month TD Phase in March 09. TD phase results will inform and support finalization of the Capabilities Development Document (CDD).

M-ATV—A non-developmental item (NDI) solution for the M-ATV is sought in response to a U.S. Central Command Joint Urgent Operational Needs Statement (JUONS). After a first round of armor, ballistic and mobility testing, the Government awarded five indefinite delivery indefinite quantity (IDIQ) contracts Thursday, 30 April 09 for three additional production representative vehicles. These 15 vehicles are now at Aberdeen for additional mobility and ballistic testing and all other evaluation. The Government anticipates down-selecting to one offeror for production delivery orders, but may not limit itself to one vendor. A production contract may occur by the end of June 2009.

Question. Do you think it is feasible to combine this effort to produce one good machine? If so, what would that cost in terms of time?

Answer. No. M-ATV is an immediate solution to address concerns about protection and off-road mobility for the emerging theater requirements. JLTV is intended to be a long term solution that balances the "Iron Triangle" of protection, performance, and payload, while maintaining expeditionary transportability. While M-ATV will provide protection and limited mobility, it trades expeditionary transportability and provides limited payload.

EFV PROGRAM NECESSITY

Question. Granted, there are scenarios that would justify any program, but given the fact that the U.S. has not conducted a beach assault landing in 59 years, is it possible that the EFV is no longer necessary?

Answer. The Marine Corps has conducted more than 100 amphibious operations in the last 25 years; operations such as Liberia, Somalia, Grenada and the amphibious demonstration during Desert Storm which tied up numerous Iraqi divisions during the liberation of Kuwait. EFV will provide the necessary capabilities to meet the security challenges across the quadrants of conflict (Irregular, Traditional, Catastrophic and Disruptive) not available in any other platform. EFV remains crucial to Expeditionary Maneuver Warfare and Ship-to-Objective Maneuver, important concepts in today's anti-access environment. Anti-ship cruise missile lethality was demonstrated when Hezbollah struck an Israeli warship during the Lebanon crisis in 2006; we need to keep ships over the horizon. A surface amphibious assault platform that self-deploys from a ship at high speed provides the joint commander mass combat power ashore. Keeping amphibious ships 25 nautical miles from the beach reduces the threat from cruise missiles and mines. The Joint Requirements Oversight Council validated the characteristics for effective amphibious assault. The EFV uniquely provides such essential characteristics.

Question. It has been suggested that the fleet might need to operate at least 100 miles from shore—beyond EFV's range. What is the possibility of this occurrence?

Answer. All of the current planning and doctrine projects that the Navy will be able to maneuver within 25 nautical miles, a distance that allows it to react and respond to a potential missile threat. A surface amphibious assault platform that self-deploys from a ship at high speed provides the joint commander the ability to mass combat power ashore. Keeping amphibious ships 25 nautical miles from the beach reduces the threat from cruise missiles and mines. The Joint Requirements Oversight Council validated the characteristics for effective amphibious assault.

Question. Are we to the point where we debate whether or not this program should go forward?

Answer. We are extremely confident that the EFV program is on the right track to produce a very effective combat vehicle, one that is vital to the Corps' ability to conduct ship to objective operations.

The EFV was certified to Congress in June 2007 (following a Nunn-McCurdy Breach) as:

— Essential to national security.
— No alternative will provide equal or greater capability at less cost.
— New cost estimates are reasonable.
— Management structure for program is adequate to manage program and costs.

During the Nunn-McCurdy certification process (2007) an IPT concurred with earlier AoA findings and indicated there are *no* alternatives to the (Fix EFV) alternative which will provide equal or greater military capability at less cost.

— A key takeaway is that initiating a (New Start) would increase operational risk due to later deliveries (nearly 5 years), and pursuing the (Upgrade AAV) alternative, while entailing lower costs, would provide less military capability due to the slow speed of the AAV.

COST/BENEFIT OF EFV DEVELOPMENT PROGRAM

Question. Exactly how much have we spent in research and development costs for this program?

Answer. The following is a break-out of RDT&E costs:

RDT&E

— Program Value at Recertification (OSD–09)—$3,304.7
— Expended To Date—$2,291.5

Question. What are the projected development costs to complete this program?

Answer. The costs to complete SDD–2 are approximately $728M.

Question. Have any studies been undertaken to determine the cost of a redesign that would take into consideration a more resistant shaped hull?

Answer. The safety and survivability of our Marines is paramount to our mission success. An EFV Mine Protection feasibility study was completed in late 2007 along with a study from The Center for Naval Analyses (CNA) which assessed external V-Hull, Internal V-Hull and appliqué configurations for survivability and performance impacts. The CNA study concluded that the appliqué configuration provides increased mine blast protection with minimum performance impacts. While restricted to a flat-bottomed hull by the design requirements of a high-speed tracked amphibian, the underbelly survivability design of the EFV has taken a critical approach to integrate proven survivability attributes. A Level "A" kit matches or exceeds the upgraded underbelly protection offered to the LAV–25/LAV III and Stryker by their survivability kits, and the Level "B" kit matches or exceeds the upgraded protection offered by the Bradley M2/M3 (BUSK) upgrade kit.

Question. Because of costs, the Marine Corps has reduced the previously planned number of units by one-half. This program is far from over. Do you think that number will be reduced again?

Answer. The Marine Corps did not reduce the program due to cost per vehicle but rather as a result of a self-assessment of the future battle field and the need for a better mix of vehicles to overcome future threats. In early 2007, The Defense Department's Strategic Planning Guidance (SPG) directed the Marine Corps to look at its entire mix of vehicles for providing mobility across the spectrum of conflict. The Marine Corps has proposed reducing its requirement from 1,013 EFVs to 573 in order to procure larger quantities of other vehicles and provide protected ground mobility to the greatest possible portion of the Marine Air-Ground Task Force (MAGTF). By accepting risk in strategic flexibility (prepositioning), and reinvesting resources to enhance irregular warfare mobility capabilities, the Marine Corps will field a balanced vehicle fleet to support all assigned missions. In some ways the Marine Corps conducted its own QDR to better position itself as the nation's force of choice.

EFV'S RESISTANCE TO LAND MINES AND IEDS

Question. According to the EFV website: The EFV design mitigates the damage caused by IED and RPG threats similar to those encountered by US forces in Iraq. How is that possible given the flat bottom design?

Answer. The safety and survivability of our Marines is paramount to our mission success. While restricted to a flat-bottomed hull by the design requirements of a high-speed tracked amphibian, the underbelly survivability design of the EFV has taken a critical approach to integrate proven survivability attributes. A study conducted by Center for Naval Analyses (CNA) concluded that current bolt on appliqué configuration provides increased mine blast protection with minimum performance impacts. A Level "A" kit matches or exceeds the upgraded underbelly protection offered to the LAV–25/LAV III and Stryker by their survivability kits, and the Level "B" kit matches or exceeds the upgraded protection offered by the Bradley M2/M3 (BUSK) upgrade kit. Additionally, the EFV is equipped with specifically designed blast shock absorbing seats for the crew and the embarked infantry and staff which provide protection from mine blast shock.

Question. Your plan proposes that once ashore, armor could be applied to the underside of the EFV. Initially, how will armor get to a beach landing and secondly, who is going to stop, crawl under that 16″ clearance and bolt on armor while being fired upon? Is this a realistic scenario?

Answer. The maneuver and lethality of the EFV will allow the combatant commander to conduct continuing operations through the initial phases of an operation. The bolt on of additional armor would not take place until the security environment allowed it and at a location that is equipped for the support (i.e. a rear logistics operating base with appropriate support).

Question. Would a V-shaped V-Hull force a total redesign of the EFV?

Answer. Yes.

Question. If the EFV fails its second Systems Development and Demonstration (SDD), would it not be difficult to justify a third SDD phase?

Answer. There are various review and oversight processes in place which will monitor the progress of the program, as required by the EFV Nunn McCurdy Certification restructure. In addition to these reviews and oversight opportunities, the program has established "Knowledge Points" which will help ensure that the program stays on course to successfully meet its reliability requirement.

— The first such Knowledge Point (KP–1) was successfully completed in December 2008 as the EFV program successfully released a Critical Design Review (CDR) during a capstone event that assessed the EFV design as mature with a predicted reliability estimate of sixty-one (61) hours Mean Time Between Operational Mission Failure (MTBOMF) greatly exceeding the exit criteria of forty-three point five (43.5) hours.

Remaining Knowledge Points to occur in FY11/FY12&FY13 are:

— KP–2 New Demonstrated Reliability after redesign (22–27 hour MTBOMF)

— KP–3 New Projected Reliability after reliability growth mods (on curve)

— KP–4 New Demonstrated Reliability after reliability growth mods (on curve)

— KP–5 New Projected Reliability Meets KPP Requirement

THE ACQUISITION PROGRAM/AMBITIOUS SCHEDULE

Question. The Government Accountability Office (GAO) alleges that: "The program did not allow enough time to demonstrate maturity of the EFV design during Systems Development and Demonstration (SDD). The original SDD schedule of about three years proved too short to conduct all necessary planning and to incorporate the results of tests into design changes. Specifically, the original schedule did not allow adequate time for testing, evaluating the results, problems, and retesting to make certain that problems are fixed before moving forward." Have these problems been addressed?

Answer. The failure of the initial System Development and Demonstration phase (SDD) prototypes to demonstrate acceptable reliability during 2006 Operational Analysis (OA) was the primary reason the program was restructured in 2007. A focused Design For Reliability (DFR) effort ensued where best practices in reliability engineering, including the utilization of an Industry Standard software suite, and robust Systems Engineering processes were instituted to improve the EFV's design and performance. At the culmination of the DFR effort, System Critical Design Review (CDR), the EFV design is predicted to have a reliability of 61 hours mean time between operational mission failure (MTBOMF), which exceeds the reliability growth curve threshold allocation of 43.5 hours established for the CDR during the program restructure.

Question. Do you see improvements in the program that will allow it to move forward in an efficient manner?

Answer. The EFV program successfully passed a Defense Acquisition Board Review following the Preliminary Design Review in Feb 2008. USD (AT&L) approved the award of the SDD–2 contract for the construction of seven EFV prototypes to be manufactured at the Joint Services Manufacturing Center in Lima, Ohio. The first new EFV prototype is expected to roll off the assembly line in March 2010.

The EFV program held a successful Critical Design Review (CDR) in December 2008 which assessed the EFV design as mature with a predicted reliability estimate of sixty-one (61) hours Mean Time Between Operational Mission Failures (MTBOMF) greatly exceeding the exit criteria of forty-three point five (43.5) hours.

Question. The EFV Approval was granted for the purchase of seven more EFV prototypes—because the originals were worn out. The vehicles have incurred a 168 percent per-vehicle cost increase, and the Marines will now procure only half as many (573) as originally planned. Combined with the need to purchase even more prototypes, and the cost growth, both factors appear to be excessive. Can you elaborate on why both situations have occurred?

Answer. In early 2007, The Defense Department's Strategic Planning Guidance (SPG) directed the Marine Corps to look at its entire mix of vehicles for providing mobility across the spectrum of conflict. The Marine Corps has proposed reducing its requirement from of 1,013 EFVs to 573 in order to procure larger quantities of

other vehicles and provide protected ground mobility to the greatest possible portion of the Marine Air-Ground Task Force (MAGTF). The current SDD prototype vehicles have been vigorously tested and have now reached the wear and tear equivalent of a 20-year service life which is adversely impacting the ability to distinguish inherent vehicle reliability performance from age-induced failures. In order to continue to grow reliability, new test assets are necessary to verify new design changes.

EFV TRANSFORMATION FROM SEA TO LAND MODE

Question. Is the EFV not a sitting duck while waiting to transform to a shore mode?

Answer. Under the Ship to objective maneuver (STOM) concept, there is no operational pause at the beach. Although the EFV must reduce its operational speed during transition from sea to shore it does not come to a stop but rather it can maintain speeds in excess of 5 knots. The EFV seamlessly transports Marines from ships located beyond the horizon to inland objectives without a pause in movement.

Question. Are there efforts to enhance this transformation time—or eliminate it altogether by making the transformation on-the-move?

Answer. The EFV can transition on the move from high water speed of 25 kts to land mobility. Although the EFV must reduce its operational speed during transition from sea to shore it does not come to a stop but rather it can maintain speeds in excess of 5 knots that is Equivalent to or better than the legacy Assault Amphibious Vehicle.

EFV DESIGN

Question. General, have you seen the interior of an EFV?

Answer. Yes.

Question. Wouldn't you find it difficult to fit a Marine, and all his equipment on either side of the engine, and then the remaining crew in the passenger compartment?

Answer. Each Marine has an individual seat that has been ergometrically designed. Testing has demonstrated that not only can the EFV carry 17 combat-equipped Marines but it does so in a way that makes them a more effective fighting force at the objective. When compared to the current AAV, Marines who spent three hours inside each vehicle performed much better in accomplishing various combat tasks following their ride on an EFV.

MARINE PERSONNEL CARRIER (MPC)

Question. General, other than financial constraints, the Committee understands that the Marine Corps believes that a shift to the right could better synchronize it with fielding of the EFV. We've discussed EFVs. Is this the "real" reason?

Answer. The Marine Corps announced in May 2008 it was deferring Milestone A (MS A) for the MPC program to the FY10 time-frame to allow the Marine Corps to effectively prioritize near-term investment decisions, in order to provide a synchronized mobility strategy with respect to the capabilities MPC, the EFV and JLTV offer for the future.

Question. General Flynn, General Brogan, also in the room with us today, said, "The Marine Corps wants that vehicle, (referring to the MPC) the requirement is definitely there." General, what amount of time is reasonable for Congress to extend such programs?

Answer. The two-year investment period will allow for the maturation of Government Furnished Equipment and armoring technologies the Marine Corps plans to integrate onto the vehicles once produced. In addition, an MPC Technology Demonstration effort has been initiated to inform CDD development on achievable capabilities and integration risks.

Question. Also, it is the understanding of the Committee that, in the interim, the Marines will continue to use MRAP vehicles and older assault amphibious vehicles. Realizing that the Marine Corps did an analysis of alternatives over a year ago, and considering the research and development costs, and by your own admission, the MPC was "out-prioritized in . . . terms of budget," did the Marine Corps consider the Army's Interim Armored Vehicle, the Stryker, a vehicle with very similar requirements?

Answer. The MPC AOA identified a medium armored personnel carrier as the solution to the MPC requirement. The initial Analysis of Alternatives (AoA) included Stryker "legacy" but it did not meet the MPC requirements.

When the Army was moving toward a Stryker upgrade we saw an opportunity to collaborate on a joint material solution. Since that time, we understand that the

Army has limited their Stryker work to product improvement on same basic Stryker chassis, thus limiting the scope of Stryker improvements. For the record however, it's fair to say Stryker will necessarily be considered in its current and Product Improvement Program (PIP) configuration as we update the AOA in the future.

The MPC program office is closely monitoring Stryker MOD and that it could likely compete as a MPC candidate.

[CLERK'S NOTE.—End of questions submitted by Mr. Murtha.]

WEDNESDAY, MARCH 11, 2009.

SOLDIER EQUIPMENT, ERGONOMICS AND INJURIES

WITNESSES

GENERAL PETER W. CHIARELLI, VICE CHIEF OF STAFF, UNITED STATES ARMY

GENERAL JAMES F. AMOS, ASSISTANT COMMANDANT OF THE MARINE CORPS

INTRODUCTION

Ms. KAPTUR [presiding.] The Committee will be in order. We would ask our special guests to take their place.

I want to welcome everyone this morning. Today our Committee will hold a hearing on the causes and possibly some solution for the injuries suffered by our soldiers and marines due to the very heavy equipment loads carried by our infantry.

We are pleased to welcome General Peter W. Chiarelli, the Vice Chief of Staff of the Army, and General James F. Amos, the Assistant Commandant of the Marine Corps. Thank you, gentlemen, so very much. These two gentlemen are well qualified to address the problems and some potential solutions to how we, simply put, are breaking down our soldiers and Marines. Thank you both for being here and for your many years of service to our Nation.

General Chiarelli, you have stated that the Army has over 20,000 soldiers in a nondeployable status, many of them nondeployable due to injuries received by carrying a very heavy combat load over rugged terrain for an extended period. The load that our soldiers and Marines carry over extended distances, over rough terrain, and often at high altitudes frequently exceeds 100 pounds. Body armor alone can weigh 30 pounds. The personal weapon, ammunition, water, possibly a radio, spare batteries, all add to the load that must be carried.

The Committee is looking forward to your statements and answers to our questions on how we can provide better load-carrying devices, how we can take some gear out of the rucksack, possibly by more frequent and more forward resupply, and how we can make gear lighter while still achieving the desired capabilities.

Before we turn to the opening statements from our witnesses, I would like to recognize the distinguished Ranking Member of our Committee on Defense Mr. Young for any remarks that he might have. Thank you so much, Bill.

Mr. YOUNG. Madam Chairman, thank you very much. And I want to share in the welcome, your welcome, to the two very distinguished military leaders.

The men and women who serve in our uniform are the best part of our national defense. All of the technology in the world isn't going to work right without the right people handling it. This sub-

committee has a very, very strong feeling toward anyone who serves in our military.

The interesting subject today talking about lightening the load is a good idea, because I have seen some of the soldiers in the field trying to handle those 100-pound and more loads of equipment, weapons, whatever. And that is a pretty tough load to begin with, let alone when you get up to an altitude up to 10,000 feet or more, which is some of the Afghan territory. So the subject of today's hearing is really, really important, and we look forward to your testimony. Thank you for being here today.

Thank you, Madam Chairman.

Ms. KAPTUR. Thank you, Mr. Young, very much.

And now, General Chiarelli, you may proceed with your summarized statement, and your entire statement will be placed in the record.

SUMMARY STATEMENT OF GENERAL CHIARELLI

General CHIARELLI. Madam Chairwoman, Ranking Member Young, distinguished members of the Committee, I thank you for the opportunity to appear before you today to discuss the impact of combat loads on soldiers serving in Iraq and Afghanistan. This is my first occasion to appear before this esteemed Committee, and I pledge to always provide you with an honest and forthright assessment. I have also submitted a statement for the record, and I look forward to answering your questions at the conclusion of my opening remarks.

First, on behalf of our Secretary, the Honorable Pete Geren, and our Chief of Staff, General George W. Casey, I would like to take the opportunity to thank you for your strong support and demonstrated commitment to our soldiers, Army civilians and family members. I and the other senior leaders of our Army care deeply about them.

A soldier's well-being is our foremost priority in everything we do. Over the past several years, the Army has fielded numerous technologies that have greatly improved a soldier's capability and the survivability of the force. However, the further challenge effected by this progress has been more and more weight added to a soldier's load, and the wear and tear on soldiers demonstrated by the increases we have seen in musculoskeletal issues has had significant impact on our deployability rate.

This is a challenge, and it needs to be addressed; however, we must also recognize that there is no simple solution. The realty is there is a trade-off to be made between the force protection and effectiveness. Certainly we could outfit a soldier with every piece of body armor and equipment available, essentially encasing him or her in a cocoon of protective technology; however, doing so would diminish his or her effectiveness and his or her ability to maneuver on the battlefield, thus putting him or her at even greater risk. A cumbersome load, for example, could cause heat injury or hamper a soldier's ability to take cover quickly from enemy fire in the event of an attack.

So the challenge cannot be solved simply by developing, procuring and fielding lighter technology and equipment, although that is a critical part of the solution. Instead, to properly address

issues requires a comprehensive approach that focuses on improving soldier training and conditioning, as well as finding alternate ways to transport equipment and supplies on behalf of soldiers. And I ensure the members of this Committee that it is what our Army senior leaders are focused on doing. We are exploring short-term solutions, as well as those that will meet ground force needs well into the future.

First, we are in the process of changing the Army's physical fitness doctrine and training programs to better prepare soldiers to the demand of military operations. Individual evaluations suggest that soldiers who train and condition properly are much less likely to sustain an injury after deployment. Therefore, we believe the best way we can help our soldiers to avoid injury due to excessive load is by preparing them as well as possible for the physiological demands of their mission, and the results today have been very, very positive.

A concerted effort is also being made to reduce the heaviness and bulkiness of combat gear and body armor required on the battlefield. Right now this can be accomplished by reducing the area of coverage and/or the level of protection in certain areas. And we rely on commanders on the ground to make correct decisions on behalf of soldiers on mission parameters such as climate, environment, time and mission duration. Let me be clear that this is absolutely where and by whom these decisions should and must be made: by commanders on the ground who are well trained and fully understand the various considerations and the current enemy situation, not by those of us removed from the battlefield, back in Washington.

Our job is to make sure commanders have everything they need to be successful. And a variety of research, development and engineering organizations are currently assisting the Army in tackling the challenge of soldier load. The challenge of equipping soldiers on the battlefield with the right technology and level of protection without overloading them is a difficult one; however, I am confident that we are taking the correct actions to reduce the burden on soldiers by making adjustments to the Army's physical training and conditioning programs, by finding ways to reduce the weight of integral pieces of equipment and body armor, and by pursuing improved new technologies and methods for carrying or delivering part of the load.

I assure the members of this Committee that there is no greater priority for me and the Army senior leaders than the safety and well-being of our soldiers. The men and women who wear the uniform of our Nation are the best in the world, and we owe them and their families a debt of gratitude for their service and many sacrifices.

Chairwoman Kaptur and members of the Committee, I again want to thank you for your continued and generous support of the outstanding men and women of the United States Army and their families, and I look forward to your questions. Thank you very much.

Ms. KAPTUR. Thank you very much, General Chiarelli. Thank you for your testimony.

[The statement of General Chiarelli follows:]

RECORD VERSION

STATEMENT BY

GENERAL PETER W. CHIARELLI
VICE CHIEF OF STAFF
UNITED STATES ARMY

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON DEFENSE

FIRST SESSION, 111TH CONGRESS

ON SOLDIER EQUIPMENT ERGONOMICS

MARCH 11, 2009

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
COMMITTEE ON APPROPRIATIONS

STATEMENT BY
GENERAL PETER W. CHIARELLI
VICE CHIEF OF STAFF
UNITED STATES ARMY

Chairwoman Kaptur, Ranking Member Young, distinguished Members of the House Committee on Appropriations I thank you for the opportunity to appear here today to provide a current status on Soldier Equipment Ergonomics. This is my first occasion to appear before this esteemed committee, and I pledge to always provide you with an honest and forthright assessment.

On behalf of our Secretary, the Honorable Pete Geren and our Chief of Staff, General George Casey, I would also like to take this opportunity to thank you for your continued, strong support and demonstrated commitment to our Soldiers, Army Civilians, and family members.

As all of you know, it has been a busy time for our Nation's military. We are at war, and we have been at war for the past seven-plus years. That has undeniably put a strain on our people and equipment. In spite of this, I continue to be amazed by the resiliency of the Force. Certainly, we have had our share of good and bad experiences. Our military has learned invaluable lessons from those experiences. And, we are continually making adjustments and improvements to our tactics, training, and equipment based upon those lessons learned.

The men and women serving in the Army today are well-trained, highly-motivated, and deeply patriotic. They are our Nation's sons and daughters, and our job as leaders is to ensure they have everything they need – the training, the information, the equipment, the confidence – to be safe – and successful in their mission. Technology is a great capability enhancer; however, it is people, not technology that win wars.

This New Strategic Environment Demands Flexibility

Today, the situation on the ground in theater is sometimes uncertain and frequently changing. The new strategic environment characterized by "Full Spectrum Operations" – ranging from Major Combat Operations (MCO) to Counterinsurgency (COIN) – demands flexibility in order to make necessary adjustments over time.

We have seen this demonstrated repeatedly in Iraq with the evolution of improvised explosive devices (IEDs). At the start of the war in 2003, U.S. Forces encountered huge numbers of IEDs, most rudimentary land mines. The Army immediately took measures to protect the Force against these IEDs by hardening vehicles, adding more plates and armor slats, employing air surveillance assets and jamming devices, etc.

However, just as we have continually made adjustments to our capabilities, so have our adversaries. Over the last several years, the enemy has employed more sophisticated devices, including command- or pressure-detonated roadside bombs, vehicular bombs, and explosive vests. Their tactics have evolved as well, to include employing multiple devices in tandem or a secondary device intended to target first responders.

Indeed, our efforts are by no means solely reactionary. To the contrary, our aim is to always stay ahead of the threat. And, in addition to employing defensive measures, we have actively engaged our adversary's network in order to locate and disarm explosive devices before they are able to employ them. However, the emergence of new technologies does ultimately require us to figure out how to best use those technologies and equip Soldiers – without overloading them.

Since WWII, the Army has fielded numerous innovative technologies, including the Kevlar helmet, body armor, and individual and squad radios. These tools and many others have greatly enhanced Soldier capability, while also significantly reducing mortality rates. In fact, the ratio of Killed in Action (KIA) to Wounded in Action (WIA)

has decreased from 41% during WWII to 12% in the Global War on Terror; likewise, the number of hostile deaths per 100,000 has dropped from 2,086 to 210. However, the further challenge effected by this progress has been more and more weight added to a Soldier's load. During WWII, the Soldier's average fighting load weighed less than 36 pounds; today it weighs in excess of 63 pounds.

Physiological Impact of Soldier Load

Today, the average Soldier load consists of a rucksack, weapon, ammunition, helmet, and other gear; the total weight can range from 63-130+ pounds depending on the variables of mission type, duration, and environment. In addition, the various components of Individual Body Armor (IBA) worn by Soldiers ranges from 2.5 pounds (side plate carriers) to 9.6 pounds (outer tactical vest) to 10.5 pounds (front and back E-SAPI ballistic plate inserts); the total weight for a full set of IBA ranges from 26 pounds to over 41 pounds. These extra pieces not only add more weight, but the cumbersome gear can also hinder Soldier movement.

Multiple studies illustrate how carrying a load causes pain, reduces performance, and increases fatigue. In one study, infantry Soldiers carrying a load of 101 pounds for 12.5 miles had a decrease of 26% in marksmanship (number of targets hit), a 33% increase in distance from the target center, and an increase in back pain compared to pre-load and march scores.

Several studies have emphasized the physiological impacts of wearing combat gear on Soldiers' performance. A 72-pound load increases energy required by 40%; increasing the load further by 20% increases the heart rate by 20 beats per minute. The distance marched in 6 hours decreases 1.24 miles for every 10 pounds over 40 pounds the Soldier carries, and the time required to complete an obstacle course increases 10-15% for every additional 10 pounds carried. In studies where Soldiers wore body armor, heart rate, respiration, core body temperature, and maximum oxygen uptake all increased significantly. Lower body endurance decreased 15%, upper body endurance

decreased 60%, and there was a 39% decrease in the Soldier's ability to cool himself. And, in all cases Soldiers rated their tasks as more difficult with IBA.

Over the past several years, we have also seen an increase in musculoskeletal issues, including sprains, stress fractures, and knee, neck, and back pain reported by Soldiers in theater or upon return from deployment. According to recent studies, of the 48% of Soldiers who wore the IBA for 4 hours or more, 70% had neck and back pain. From July 2004 to October 2008, low back, mid/upper back, and neck pain were the chief complaints of Soldiers seeking care from physical therapists. Today, the risk for injury is even greater in Afghanistan (compared to Iraq), given the higher elevations and steep, rugged terrain. The reality is you cannot hump a rucksack at 8,000 to 11,000 feet for 15 months, even at a young age, and not have an impact on your body.

Army Deployability Rates

The "wear and tear" on Soldiers over the past seven-plus years has had a significant impact on Army deployability rates. Since 2006, the number of total non-deployables has risen by an estimated 2,000 to 3,000, putting the current figure at about 20,000. In many cases, injured Soldiers are sidelined for lengthy periods of time for recovery and rehabilitation. The time frame for tissue healing, in particular, varies greatly; in some cases there is no lost duty time and in other cases the damage ultimately results in a Soldier being medically discharged from the Army.

It is important to recognize that there are differing stages of recovery and rehabilitation. While it may take only a few days, for example, for shoulder pain to subside, it can take 6-12 or even 16 weeks for normal tissue healing to occur. And, in fact, Soldiers are more susceptible to further injury during these stages of recovery when they may "feel" better (less/no pain); meanwhile, the more serious injuries to ligaments, tendons, etc. are still healing. Without proper rest or rehabilitation the risk for further injury or re-injury increases.

Part of the challenge is environmental (elevation, terrain, weather conditions, road infrastructure, etc.) Another factor is physical size (heaviness/bulkiness) of a Soldier's load. The third aspect is cultural. Over the last 30+ years, the Army has seen an increase in average muscle mass and body fat percentages for new recruits. Experts have identified changes in diet (increase in consumption of junk food/soda/etc.), cutback in outdoor activities and mandatory physical exercise programs in schools, and an increase in more sedentary activities (computer games, television viewing, etc.) as contributing factors to the increase in body fat.

In the military, we train with a combination of running, jumping, marching, and multi-directional impact activities. Oftentimes, new recruits – even those in seemingly peak aerobic physical condition – end up suffering injuries, such as stress fractures, during basic combat training because their bones are not accustomed to nor prepared for this type of training and exercise. The Army is working hard to find better ways in the future to identify susceptible individuals, and to develop programs to train new Soldiers properly in order to avoid injury.

Today, the Army is pursuing a comprehensive approach (short-term, long-term, and R&D) to address the physiological impact of excessive loads on Soldiers deployed in support of combat operations. And, our efforts are focused on two key areas: the Army's physical training/conditioning programs and the weight of Soldier Load and IBA.

Physical Training / Conditioning Programs

Right now, the Army is in the process of changing its physical training doctrine in order to better prepare Soldiers for the physical demands of military operations.

The Center for Health Promotion and Preventive Medicine (CHPPM) worked with the U.S. Army Physical Fitness School (USAPFS) from 2001-2005 to develop, improve, and test the emerging Army Physical Fitness doctrine called Physical Readiness Training (PRT). According to their joint report, *"United States Army Physical Readiness Training: Rationale and Evaluation of the Physical Training Doctrine":*

"PRT follows the principles of progressive overload, regularity, specificity, precision, variety, and balance. Specificity was achieved by examining the standard list of military (warrior) tasks and determining 1) the physical requirements, 2) the fitness components involved, and 3) the training activities that could most likely improve the military tasks. Injury prevention features include reduced running mileage, exercise variety (cross-training), and gradual, progressive training."

The PRT concept focuses on improving Soldiers' cardiorespiratory endurance; muscular strength, muscular endurance (anaerobic endurance), power; and movement proficiency (incorporates balance, flexibility, coordination, speed, and agility).[1]

To date, PRT has been evaluated for its injury reduction potential in three Army environments (basic combat training, advanced individual training, and an operational infantry unit (4th Brigade, 10th Mountain Division, preparing for deployment to Afghanistan); and one laboratory study that compared PRT to an aerobic and weight training program. The battalion from 10th MTN Div (477 men) prepared for Afghanistan by focusing on ground tasks (running, calisthenics, guerrilla drills, etc.); off-ground tasks (climbing drills, conditioning obstacle courses, confidence obstacle courses, etc.); and combatives (close, medium, long-range.) And, the result was 20% fewer lower extremity injuries and fewer post-deployment injuries compared to other units. Overall, the adjusted risk of injury was 1.5 to 1.8 times higher in groups of Soldiers performing traditional military physical training programs when compared to groups using a PRT program.[2] The Army plans to begin implementing the new PRT doctrine across the Force over the next year.

In the meantime, units across the Army have adopted a variety of other injury prevention/performance enhancement programs. For example, the Ranger Regiment, U.S. Special Forces, and several Brigade Combat Teams (BCTs) have implemented

[1] Dr. Joseph J. Knapik, et al., "United States Army Physical Readiness Training: Rationale and Evaluation of the Physical Training Doctrine," US Army Center for Health Promotion and Preventive Medicine, 5.
[2] Ibid, page 3.

programs that, in addition to traditional aerobic exercise, also emphasize core strengthening, plyometrics, and speed and agility drills. And, physical therapists are now assigned to and deploy with BCTs. Physical therapists use a sports medicine approach to identify, treat, and rehabilitate musculoskeletal injuries expeditiously. And, those units that have physical therapists have shown a reduction in injury rates.

Initial evaluations suggest that Soldiers who train and condition properly are much less likely to sustain an injury after deployment. Therefore, the best way that we can help our Soldiers to avoid suffering debilitating musculoskeletal injuries due to excessive load is by preparing them as well as possible for the physiological demands of their mission. By improving Soldiers' physical strength and conditioning we also improve the overall medical readiness of our Force. And, we have seen evidence of this assessment in the reduced Soldier injury rates for those units that, prior to deployment, used programs that emphasized PRT exercises, core strengthening, and aggressive strength training. Studies have also confirmed a decline in injury rates at initial entry training since the introduction of PRT.

Reducing Soldier Load

The Army recognizes that the weight a Soldier is carrying has a direct impact on his ability to perform his mission. Therefore, a concerted effort is being made to reduce the heaviness and bulkiness of combat gear and IBA required by Soldiers on the battlefield, without sacrificing survivability.

The reality is there is a trade-off to be made between force protection and effectiveness. Certainly we could outfit a Soldier with every piece of body armor and equipment available, essentially encasing him or her in a "cocoon" of protective technologies. However, doing so would greatly diminish his or her effectiveness, his or her ability to maneuver on the battlefield, and, as a result, actually put him or her at even greater risk. The cumbersome load, for example, may slow him or her down and limit his or her ability to quickly take cover in the event of an attack.

Lightening a Soldier's load can be accomplished by reducing the area of coverage and/or the level of protection in covered areas. And, Commanders on the ground are responsible for evaluating mission parameters (climate, environment, mission duration, etc.) to determine the correct configuration of a Soldier's load and IBA.

Other options the Army is pursuing include: lessening the weight of individual pieces of equipment, developing technologies that would carry part of the load on behalf of the Soldier, and transporting equipment or supplies to a forward location ahead of Soldiers. We are exploring both short-term solutions, as well as those that will meet ground forces needs well into the future.

In the short-term, the Rapid Equipping Force (REF), the Asymmetric Warfare Group (AWG), and the U.S. Army Natick Soldier Research, Development, and Engineering Center (NSRDEC) are in the process of tackling the challenge of the Soldier's Load on behalf of the Army.

The REF is an organization that has helped to address specific capability shortfalls by canvassing government, industry, academia, and the scientific community for existing or emerging technologies. The REF then provides limited quantities of the best available off-the-shelf equipment to the Warfighter as quickly as possible.

Among the many items REF has provided to units in theater are remotely-operated cameras that assist with force protection at Forward Operating Bases and Combat Operating Posts; IED and other explosive material detectors that help our Soldiers defeat IED threats; improved ballistic protection for military vehicles that increases survivability; and lighter machine guns in Afghanistan that are helping to reduce the weight of a Soldier's Load.

In September 2008 the REF Director and Sergeant Major visited units in Afghanistan and received requests from those units to lighten the load of Soldiers operating in extreme elevations greater than 6,000 feet. REF formed an Integrated

Product Team (IPT) in October 2008 with PEO Soldier, AWG, Army Test and Evaluation Command (ATEC), and United States Army Infantry Center to develop solutions. Within 47 days, the IPT identified, coordinated, and obtained from U.S. Special Operations Command 104 lightweight machine guns and delivered the weapons to the requesting BCT in Operation Enduring Freedom (OEF) with user training provided by Crane Naval Surface Center and the AWG. These weapons decreased the Soldiers load by up to 9 pounds. Concurrent to this effort, the AWG Field Team helped the BCT craft an Operational Needs Statements (ONS) focused on lighter body armor.

Simultaneously, AWG developed a formal assessment plan in partnership with John Hopkins University to prove or disprove the hypothesis that weight impacts on a Soldier's performance with regards to suitability, survivability, lethality, and maneuverability. The assessment takes a holistic look at the Soldier as a system and focuses on the implications and effects of lightening the Soldier's load, rather than assessing individual pieces of equipment.

When REF received the approved ONS from the Warfighting Commander, the organization coordinated with Program Executive Office (PEO) Soldier and the Army Staff; and, REF is now working with AWG and the IPT to provide a BCT in OEF with lightweight body armor and 14 additional pieces of equipment. These items, combined with the lightweight machineguns and lightweight body armor, have the potential to decrease a Soldier's load further by 14 to 23 pounds. Once completely employed, this equipment will be assessed in OEF by AWG, ATEC, and BCT personnel and the results – good or bad – will inform future REF equipping actions and Army fielding decisions.

While the REF focuses on existing and emerging technologies, NSRDEC conducts and sponsors research into future technologies, including lighter materials for body armor. Advanced fibers and carbon nanotube-based hard armor, for example, promise substantial reductions in the weight of future body armor, while improving body conformity and maintaining protection levels consistent with anticipated threats. The modern pack system design, developed by NSRDEC and currently used by Soldiers,

distributes the load in order to gain energy efficiency and minimize unwanted resultant forces exerted on the body.

Advances in food technologies achieved by NSRDEC have also resulted in a 40-50% reduction in the weight of combat rations carried by Soldiers during initial periods of high intensity conflict. And, the human and small unit modeling research currently being conducted by NSRDEC in an effort to better understand the trade-off between added weight and capability will help Commanders to make more informed decisions on what Soldiers should carry and why.

PEO Soldier, the Army organization that designs, develops, procures, fields, and sustains virtually everything the Soldier wears or carries, is also looking for ways to lighten the load on our Soldiers in the long-term. Over the last several years, PEO Soldier has been working to develop lighter systems for force protection, lethality, and advanced command and control gear. The Improved Outer Tactical Vest (IOTV) is approximately three pounds lighter than its predecessor, with greater coverage area. The combination of IOTV with X-SAPI is still lighter with more protection than the current OTV with E-SAPI.

In the weapons area, PEO Soldier is preparing for production of a lightweight medium machine gun, and an under barrel shotgun that will eliminate the need for some Soldiers to carry two separate weapons. These two improvements provide about 5 pounds of savings for the affected Soldiers.

Land Warrior, also developed by PEO Soldier, is helping to bring the networked battlespace down to the dismounted frontline troops. Land Warrior combines computers, lasers, navigation modules, radios, and other technologically advanced equipment in order to improve Soldiers' situational awareness, their ability to communicate on the battlefield, and, ultimately their ability to fight effectively and survive. Land Warrior – and, the next generation system currently being developed,

Ground Soldier Ensemble (GSE) – represent the Army's effort to increase mission effectiveness by linking the Soldier to the network.

GSE does incur a weight increase principally due to power requirements, but the Army is currently pursuing advanced technologies in an effort to further reduce this weight in future configurations. Right now, a smaller battery, the LI-80 (80 watt-hours) weighing approximately one pound less than the rechargeable LI-145 (145 watts-hours) battery can be used for shorter duration missions. The capabilities of GSE also eliminate the need to carry a military GPS (i.e., Defense Advanced GPS Receiver or DAGR) or inter-squad radio.

In the future, unmanned platforms could also contribute significantly to reducing injuries and wear and tear on Soldiers. As envisioned, such platforms could transport equipment, serve as resupply vehicles, provide emergency evacuation support, etc. The Army is aggressively seeking these and other advanced technology solutions to maximize Soldier effectiveness and reduce Soldier load.

Another option being exercised in Afghanistan to reduce the carrying burden on Soldiers is the conduct of resupply missions by aerial delivery using helicopters and fixed-wing aircraft with parachute systems. An average of 26,000 pounds of supplies (including liquids) are delivered per day via air drop, including small multifunctional packages of supplies, usually duffel bags filled with everything from food and water, batteries, ammo, and replacement uniforms. The container delivery system is the most commonly used method for the aerial insertion of supplies quickly for military and contingency operations. Using these air drops reduces the need for Soldiers to carry excessive amounts of supplies and it lessens the number of convoys on the roads. Aerial delivery is also necessary since many operating sites in Afghanistan simply cannot be resupplied by vehicle convoy. However, there are limitations to conducting precision aerial delivery of supplies and equipment, such as weather and threat conditions. And, in Afghanistan the mountains can frequently interfere with the accuracy of precision guidance systems.

Need for Procurement Reform

I assure the Members of this committee that we will never be complacent in our responsibility to ensure Soldiers have the right training and equipment to be safe and successful in their mission. The shortfalls Soldiers identify on the battlefield can mean life or death for them, and so we have an obligation to update training, find solutions, and deliver capabilities as quickly as possible.

Unfortunately, as Secretary Gates said at National Defense University in September 2008, "Our conventional modernization programs seek a 99 percent solution in years. Stability and counterinsurgency missions – the wars we are in – require 75 percent solutions in months." Clearly we need to update our approach. In the past, the acquisition process was able to keep pace with technology. However, that is not the case today, and our Soldiers cannot afford to sit and wait.

Over the past several years, we have found ways to deliver needed capabilities to Soldiers in the short-term, and it has been made possible through the financial support of Congress. With your help, we have been able to field many critical capabilities in a matter of months versus years primarily through the use of Supplementals. By procuring COTS, or Commercial, off-the-shelf products, like the Mine Resistant Ambush Protected (MRAP) vehicles, we have saved arms, legs, and – most importantly – the lives of countless Soldiers.

Closing

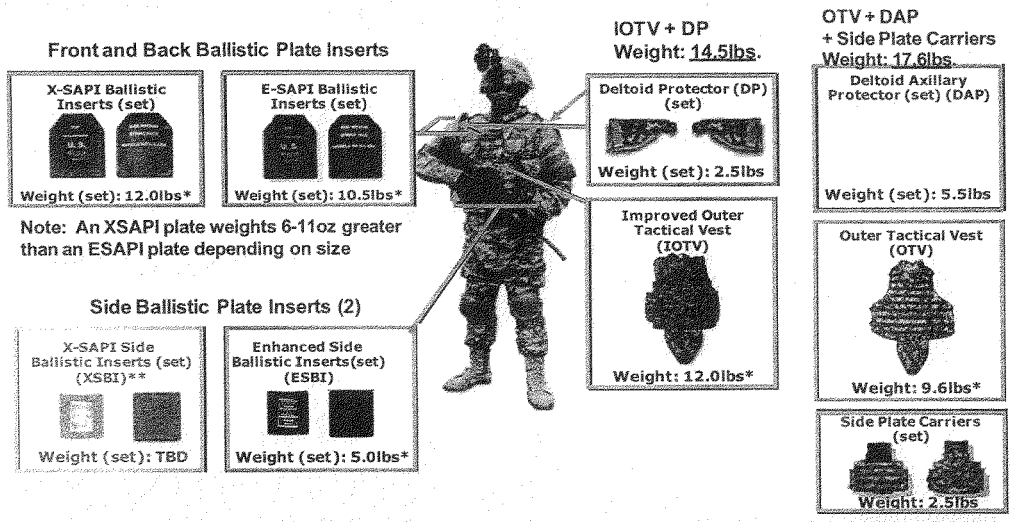
In today's dynamic environment, we must continue to be flexible. While we are focused on the critical mission at hand, we are absolutely committed to providing the best Force Protection available. However, as capabilities – ours and our adversaries – continue to mature, the challenge becomes how to equip Soldiers properly without overloading them. The reality is there will always be a trade-off between load and capability, even as advances in technology progressively lighten the weight of existing capabilities. Simply utilizing technology to reduce the weight of individual pieces of

equipment will not ultimately lighten a Soldier's load; it will only serve to make room for added capability, until the Soldier once again reaches maximum capacity. Therefore, in addition to pursuing lighter technologies, we must also ensure we truly understand the trade-offs between load and capability, and can identify that point of diminishing returns where any additional capability does more harm than good. I assure the Members of this committee that this challenge will continue to be a top priority for our Army's senior leaders.

I am confident that we are taking the correct actions to reduce the physical burden on Soldiers without compromising their survivability, by making adjustments to unit-level physical training and conditioning programs; finding further ways to reduce the weight of individual pieces of equipment and IBA; and pursuing improved and new technologies and methods for carrying or delivering part of a Soldier's load.
Again, I can assure the esteemed Members of this committee that there is no greater priority for me and the other senior leaders of the United States Army than the safety and well-being of our Soldiers. The men and women who wear the uniform of our Nation are the best in the world, and we owe them and their families a tremendous debt of gratitude for their service and for their many sacrifices. I am deeply honored to serve alongside them.

Chairwoman, Members of the Committee, I thank you again for your continued and generous support of the outstanding men and women of the United States Army and their families. I look forward to your questions.

Interceptor Body Armor Configurations



Interceptor Body Armor Weights					
System	X-Small	Small	Medium	Large	X-Large
IOTV w Deltoid Protector /X-SAPI + ESBI	27.0lbs	29.4lbs	31.5lbs	34.5lbs	39.9lbs
IOTV w Deltoid Protector /E-SAPI + ESBI	26.1lbs	28.4lbs	30.0lbs	33.2lbs	38.5lbs
OTV w DAPS/E-SAPI + ESBI	29.1lbs	31.4lbs	33.1lbs	36.1lbs	41.6lbs

** = X-SAPI Side Ballistic Inserts not yet procured

* = Weight in size medium

Ms. KAPTUR. General Amos, why don't we proceed with you. Good morning. Welcome.

SUMMARY STATEMENT OF GENERAL AMOS

General AMOS. Chairwoman Kaptur, and Ranking Member Young, and distinguished members of the Committee, thank you for this opportunity to share what the Marine Corps is doing to mitigate combat load injuries and to lighten the load for our warfighters. On behalf of all Marines, Sailors and their families, I extend my appreciation for the continued support that this Committee and Congress provides to our Marine Corps. I will take this opportunity to highlight just a few things that the Marine Corps is doing with regards to lightening the load.

Over the last 4 years, the Marine Corps has not seen a significant increase in injuries directly related to changes in the weight or the type of equipment. A delicate balance exists between mission accomplishment and force protection. Numerous tactics, techniques and procedures have been developed to mitigate the distances dismounted Marines must traverse and, therefore, the amount of gear they must carry.

The fact remains, however, that current military operations ultimately require Marines to dismount and engage the enemy in close combat. To do so necessitates Marines that are agile and unencumbered enough to carry the day, but protected enough to survive. This is a delicate balance.

The most significant part of the individual Marine's load is his or her body armor. At least 30 percent of a Marine's load is his personal protective equipment. The technology to protect Marines is better than in previous generations, but comes with significant cost and weight. Please know that your Marines are the best protected force on the battlefield. We have ensured that they have the very latest technology has to offer. Because we are constantly engaged in fluid combat operations, we understand that our commanders on the battlefield are in the best position to determine the most effective combat load for any given situation. Operational commanders determine how best to equip their Marines based on their analysis of mission requirements, the enemy situation and environmental conditions.

To enable this flexibility we provide a range of options in personal protective equipment that can be configured to meet varying levels of threat. You will see some of that here demonstrated this morning shortly.

We believe conditioning is a major contributing factor to the success of mitigating combat load injuries. Physical fitness is an essential part of the Marine Corps and has been rooted in our most basic levels of training. Marines are renowned for their being physically ready for the challenges of austere and demanding environments, but there is always room for improvement.

As part of our lessons learned process, we determined that we needed to tailor Marine physical training to the realities of weight and combat missions. In October of 2008, the Marine Corps added a new combat fitness test to its longstanding physical fitness test. The combat fitness test is actually a training regimen that specifically addresses movements typical of combat operations and seeks

to improve a Marine's ability to perform them while decreasing associated injuries.

The best weapon and most precious asset in the Marine Corps is the well-trained and -equipped and -conditioned Marine. With your continued support your Marine Corps will remain the Nation's force on readiness and continue to fulfill its mission of being ready when the Nation is the least ready.

Thank you. I request my written testimony be accepted for the record, and I look forward to your questions.

[The statement of General Amos follows:]

NOT FOR PUBLICATION
UNTIL RELEASED BY
THE HOUSE APPROPRIATIONS
COMMITTEE
SUBCOMMITTEE ON DEFENSE

STATEMENT OF

GENERAL JAMES F. AMOS

ASSISTANT COMMANDANT OF THE MARINE CORPS

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE

SUBCOMMITTEE ON DEFENSE

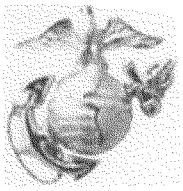
CONCERNING

COMBAT LOAD INJURIES

ON

MARCH 11, 2009

NOT FOR PUBLICATION
UNTIL RELEASED BY
THE HOUSE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON DEFENSE



General James F. Amos
Assistant Commandant of the Marine Corps

General James F. Amos, USMC, is the 31st and current Assistant Commandant of the Marine Corps. A Naval aviator by trade, General Amos has held command at all levels from Lieutenant Colonel to Lieutenant General. Most notably he commanded the 3rd Marine Aircraft Wing in combat during Operations Iraqi Freedom I and II from 2002-2004, followed by command of the II Marine Expeditionary Force from 2004-2006. He subsequently served as the Commanding General, Marine Corps Combat Development Command and as the Deputy Commandant, Combat Development and Integration from 2006 to July 2008. General Amos was promoted to his present rank and assumed the duties of Assistant Commandant of the Marine Corps on 2 July 2008.

Operational assignments include tours with Marine Fighter Attack Squadrons 212, 235, 232 and 122 where he flew the F-4 Phantom II. In 1985 General Amos assumed command of Marine Wing Support Squadron 173. Later, transitioning to the F/A-18 Hornet, he assumed command of Marine Fighter Attack Squadron 312 and subsequently joined Carrier Air Wing Eight onboard USS Theodore Roosevelt (CVN-71). General Amos took command of Marine Aircraft Group 31 Beaufort, SC in May 1996.

General Amos' staff assignments include tours with Marine Aircraft Groups 15 and 31, the III Marine Amphibious Force, Training Squadron Seven, The Basic School, and with the MAGTF Staff Training Program. Promoted to Brigadier General in 1998 he was assigned to NATO as Deputy Commander, Naval Striking Forces, Southern Europe, Naples Italy. During this tour he commanded NATO's Kosovo Verification Center, and later served as Chief of Staff, U.S. Joint Task Force Noble Anvil during the air campaign over Serbia. Transferred in 2000 to the Pentagon, he was assigned as Assistant Deputy Commandant for Aviation. Reassigned in December 2001, General Amos served as the Assistant Deputy Commandant for Plans, Policies and Operations Department, Headquarters, Marine Corps.

Introduction

Chairman Murtha, Congressman Young, and distinguished Members of the Subcommittee, I want to thank you for your generous support and the opportunity to speak to you today about the weight of the combat equipment your Marines carry and injuries that weight may cause. Additionally, I will share with you our ongoing efforts to lighten the equipment loads of your Marines.

The health and welfare of our most sacred resource, the individual Marine, is critical to the long-term success of our Corps. Despite high operational tempo, your Marines continue to be resilient and highly motivated, performing superbly in all assigned missions. Today, over 26,000 Marines are deployed to the U.S. Central Command's area of responsibility in support of Operation IRAQI FREEDOM (OIF) and Operation ENDURING FREEDOM (OEF). We are facing enemies and operating environments that are different than decades past, and Marines are adapting accordingly.

The goals of improving our equipment and lightening our Marine's load have been with us since the founding of our Corps. Six years of combat in challenging and varied environments have taught us that optimal combat effectiveness requires a balance between protection, maneuverability, and lethality, among other factors. Combat environments constantly change, and experience has shown that Marines on the battlefield are in the best position to determine the most effective combat load for a given situation. Operational commanders determine how best to equip their Marines based on their analysis of mission requirements, the enemy situation, and environmental conditions. To enable this flexibility, we provide a range of options in personal protective equipment that can be configured to meet varying levels of threat.

Over the last four years, the Marine Corps has not seen a significant increase in injuries directly related to changes in the weight and type of equipment. Regardless, we continue to seek out and acquire lighter, more effective equipment. With your continued support, we will outfit your Marines with the latest in protective technology.

Conditioning, Deployment Tempo, and Injury Trends

Conditioning

An essential part of Marine Corps culture is to condition Marines for combat and ensure they are physically ready for the fight. We treat physical conditioning as an essential part of

readiness for combat and view Marines as professional athletes. To reduce injuries and promote fitness, we recently increased the number of physical therapists and sports medicine physicians at core Marine Corps training facilities such as the Marine Corps Recruit Depots, Officer Candidate School, and The Basic School; and at our major bases at Camp Lejeune, North Carolina and Camp Pendleton, California. These health professionals have mitigated the occurrence of injury and educated our warfighters on how to prevent injuries and develop, maintain, and recondition their bodies. Additionally, in October 2008 we added the Combat Fitness Test to the Corps' fitness requirements. The Combat Fitness Test measures the abilities demanded of Marines in combat – running in boots and camouflaged trousers, low crawling, and carrying loads and simulated casualties. In short, our physical training regime is designed to prepare Marines for the rigors of combat, which include wearing body armor and carrying combat loads.

Deployment Tempo

The Marine Corps has been able to sustain and deploy operationally ready and mission capable forces despite the strain of harsh environments and heavy loads on individual Marines. However, we recognize that both these factors take a toll on the human body over extended periods. Our plans to grow the force to 202K Marines, which, with your continued support we will achieve by October 2009, will increase the dwell time of Marines and provide a longer period to recover between deployments. The current deployment-to-dwell ratio of many of our operating forces is slightly more than 1:1. Our growth to 202k supports our goal of increasing the deployment-to-dwell ratios of our operating forces to 1:2. A 1:2 deployment-to-dwell ratio, which will provide Marines 14 months at home station for every seven months deployed, is critical to the long term health of our forces.

Injury Trends

According to the Naval Health Research Center and the DoD Center for Deployment Health Research, musculoskeletal injuries are the predominant contributors to Non-battle Injuries (NBI) occurring in theater. They consist of falls, strains, sprains, and musculoskeletal overuse injuries. We frequently see injuries due to embarking and disembarking from vehicles where limitations in motion, disturbances in balance, and increased muscular demands created by wearing personal protective equipment (PPE) may have been a contributing factor. Also, some

evidence suggests that the weight and bulk of personal protective equipment have been contributing factors in injuries and deaths caused by delays evacuating vehicles underwater or on fire.

Analysis of active duty USMC injury data from January 2005 to May 2008 was conducted by the Navy and Marine Corps Public Health Command (NMCPHC). The injury rates below are expressed as a percent of all injuries for the time period.

Injuries treated as inpatients

	2005	2006	2007	2008
Fracture	19.43%	21.34%	26.15%	23.75%
Back Injuries	1.61%	2.49%	2.47%	2.68%
Lower Extremities Sprains/Strains	1.61%	1.62%	1.41%	4.59%

Injuries treated as outpatients

	2005	2006	2007	2008
Fracture	16.25%	17.49%	17.47%	16.56%
Back Injuries	8.92%	7.37%	7.30%	8.66%
Lower Extremities Sprains/Strains	25.52%	24.86%	24.43%	26.37%

Overuse injuries classified as stress fractures

YEAR	NUMBER OF STRESS FRACTURES	TOTAL NUMBER OF OVERUSE INJURIES	PERCENT OF STRESS FRACTURES OF ALL OVERUSE INJURIES
2004	995	20380	4.9%
2005	3211	57720	5.6%
2006	2791	52332	5.3%
2007	2612	58426	4.5%
2008	962	21332	4.5%
Totals	10571	210190	5.0%

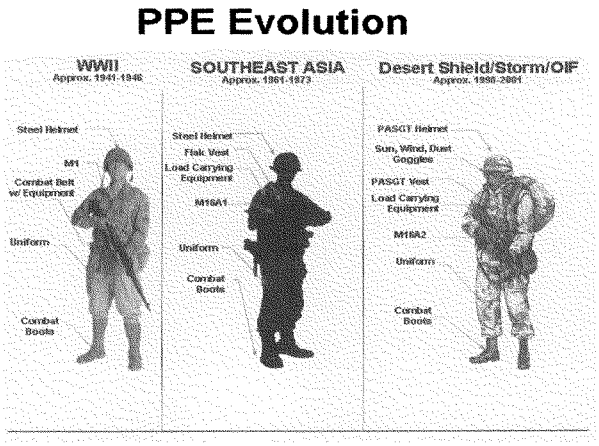
To put the difference between inpatient and outpatient injuries into perspective, there were 7,841 inpatient discharges compared to 563,916 ambulatory clinic visits for the same time period. Marines are seen for injuries in outpatient clinics at an 80:1 ratio to injuries treated as hospital admissions.

The NMCPHC analysis indicates there has been some variation in rates of fracture, back and lower extremity injury rates over the past 4 years, but no dramatic upward trend in any specific injury which could be directly tied to changes in personal protective equipment or pack weight.

Evolution of Body Armor Protection

Prior to the late 20th Century, Marines engaged in combat were outfitted with minimal personal protection. Personal protection afforded to the soldiers of World Wars I & II was limited to helmets. However, even with minimal protection, the average Marine still found himself weighed down with equipment. (See Table 1)

Table 1

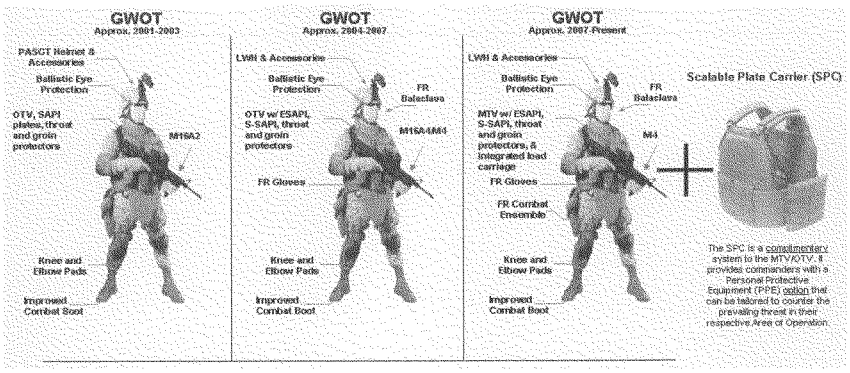


It was not until the U.S. became involved in combat operations in Southeast Asia that body armor in the form of the flak vest was introduced for the first time. Improvements in materials resulted in new, better helmets and flak vests in the 1990s. Flak vests provided greater protection to Marines against shrapnel from indirect fires, but very little, if any, protection against small arms ammunition. (See Table 1)

As a result of technological advancements, today's Marine finds himself more protected than ever before. Protective vests with Small Arms Protective Insert (SAPI) and Enhanced Small Arms Protective Insert (ESAPI) plates provide the Marine with armor protection against small arms ammunition in addition to fragmentation. Additionally, areas of protection have expanded to the eyes, groin, and deltoids. Although the current ensemble of protective gear has saved lives, it has increased the amount of weight carried by the Marine on the battlefield. (See Table 2)

Table 2

PPE Evolution



Typical Personal Marine Combat Load

The typical personal infantry Marine combat load must provide a balance of lethality, survivability, maneuverability and communication/situational awareness. Currently, the specific combat load carried by the individual Marine is based upon the situation. We have fielded items that enhance our commanders' ability to scale loads to best suit each situation. Today, Marines are provided with the best available Personal Protection Equipment (PPE) such as the Scalable Plate Carrier (SPC), Modular Tactical Vest (MTV), Lightweight Helmet (LWH) and Flame Resistant Organizational Gear (FROG). Their infantry weapons systems include rifles, optics, pointers, ammunition, and grenades enabling them to engage the enemy accurately at a moments notice. Equipment enhancing the warfighter's communication/situational awareness includes Personal Role Radios, Global Positioning Systems, binoculars and night vision goggles.

Weight versus Protection

Frequently, a challenge we face is that each advance in capability comes with a weight penalty. The evolution of body armor has added weight to the combat load as a result of

providing more protection. Increases in body armor weight seen in the recent 4-5 year period are due to incremental increases in protection levels and areas of coverage provided. We evolved from the flak vest to the Outer Tactical Vest to the Modular Tactical Vest (MTV), with SAPI, and finally with ESAPI. In the case of the protective vest, we have mitigated the weight increase by improving weight distribution on the shoulders and hips. Future efforts will concentrate on weight reduction through improved, lighter materials.

One example of our efforts to reduce weight without compromising our warfighter's safety is a modular body armor system called the Scalable Plate Carrier (SPC). The SPC provides the commander options for load and protection scalability to suit the mission at hand. This body armor capability allows greater mobility with reduced thermal stress as compared to the MTV. This could be particularly helpful in high elevations, thick vegetation and tropical environments. In a size large, the SPC, with cummerbund and groin protector, weighs approximately 25% less than the same MTV configuration. The SPC is not intended to replace the MTV as the primary protective vest. Instead, it provides a lighter form of ballistic protection while still allowing the Marine the ability to remain combat effective when operating in extreme environments.

Another advancement in PPE is the Lightweight Helmet. The current LWH, size medium, weighs 3.1 lbs, approximately 6% less than its predecessor, the Personnel Armor System for Ground Troops (PASGT) helmet, and provides a greater level of protection.

As we shift focus to OPERATION ENDURING FREEDOM, cold weather clothing needs will increase. Newer technology allows for components containing better moisture management properties, lighter weight and less volume. For example, the evolution of the long johns has progressed from cotton to polypropylene to the currently fielded Desert Tan Silk Weight which not only provides the same thermal protection at a lighter weight than its predecessors, but it is now flame resistant (FR), no melt, and no drip.

Next Generation of Combat Load Equipment

The Corps recognizes that PPE contributes to a significant portion of the current infantry combat load. We are planning improvements on weight reductions through new, light weight, high performance materials and fabrics for next generation PPE. Modular PPE designs are being explored to reduce basic combat weight. The MTV is undergoing a pattern analysis and redesign

to eliminate the overlapping areas and provide the optimal range of coverage necessary for the warfighter's protection and mobility. The Marine Corps is closely monitoring new technology and materials that have the potential to improve protective elements of body armor. These efforts are coordinated through our Science and Technology (S&T) community at the Office of Naval Research (ONR), located in Arlington, VA, and Naval Research Lab (NRL), located in Washington, D.C.

The Marine Corps has challenged industry to develop and design equipment that can perform as effectively as today's gear but with reduced weight and volume. We have been working closely with the Army to present our common requirements to industry. Collaboration with our industry partners, academia, sister Services and other Departments and Agencies continue to involve discussions about ways to decrease the burden on the individual Marine.

Future Initiatives

In June 2007, at the request of the Commanding General, Marine Corps Combat Development Command, the Naval Research Advisory Committee (NRAC) completed a study which focused on Lightening the Load of the Marine. The objectives of the study were to assess the elements of the Marines combat load, identify primary weight and volume contributors, identify and evaluate technology initiatives, and consider changes in operations, logistics, and training in order to reduce the burden without adversely affecting combat effectiveness, safety and tactics. The NRAC approached the study from four perspectives: reduce the weight, transfer the load, enhance human performance, and a systems approach.

Reduce the Weight

The NRAC study found that, in the future, the use of advanced materials, caseless ammunition, and advanced batteries has the promise of significant weight reduction. The study stated that these improvements could amount to a possible savings of approximately 15 to 21 pounds per Marine.

Transfer the Load

NRAC recommended transferring the load of equipment from the squad to an organic load-carrying asset. The Office of Naval Research (ONR) is evaluating the use of autonomous

robotic "mules" and other electro-mechanical load bearing systems to help alleviate the loads on dismounted warfighters. Defense Advance Research Projects Agency (DARPA) is also conducting science and technology studies on an Unmanned Ground Vehicle (UGV) referred to as the Multifunction Utility, Logistics, and Equipment Vehicle (MULE). The MULE is an unmanned platform that provides transport of equipment and/or supplies in support of dismounted maneuver forces. One such project is a quadruped UGV called Big Dog, which successfully proved the concept to offload equipment using an autonomous vehicle.

The Legged Squad Support System (LS3) Program is another effort by DARPA to develop a walking platform, preferably a quadruped, which can accompany dismounted Marines and increase their combat capability. LS3 is envisioned to augment squads by maneuvering with them in complex terrain where wheeled tactical vehicles cannot go, carrying equipment for the squad. LS3 is intended to carry 400 pounds or more of payload, allow for 24 hours of self-sustained capability including 20 miles of maneuver, with a total weight (including payload and fuel) of no more than 1250 pounds.

Enhance Human Performance

There are several factors other than weight that can cause injury due to combat loads. Fatigue, thermal strain, physical fitness, human performance, nutrition, proper sizing, and proper training can all influence the individual Marine's susceptibility to injuries related to equipment. There are several S&T efforts aimed to enhance human performance and mitigate the effects of weight via a better understanding of human physiology and cognition. The Army's Natick Research Development and Engineering Command has developed improved rations that provide more calories and carbohydrates to boost energy. Caffeine supplements are now included in Meals Ready to Eat (MREs) and other supplements (tyrosine, quercetin, etc) are being studied. Other promising near term gains may be in the areas of ergonomics and training. We appreciate your continued support of the multiple research initiatives underway to explore ways to reduce the effects of combat load on our Marines.

A Systems Approach

The Marine Expeditionary Rifle Squad (MERS) program applies a systems engineering approach to equipping a Marine rifle squad. The MERS program views the Squad as a System

with the objective of distributing capabilities across the squad and integrating all the equipment carried within the squad. The primary function of MERS is integration and modernization of everything worn, carried, and consumed within the squad by coordinating integration across all programs that provide material solutions for the squad. One benefit of this program is the evaluation of weight on the performance of an infantry squad. The MERS program is able to coordinate systems to eliminate redundant weight and volume. Looking at the Squad as a System allows us to make improvements and distribute capabilities that would not be feasible at the individual level.

To better focus on these critical areas, Marine Corps Systems Command and the Marine Corps Combat Development Command have established the Squad Integration Facility or *GRUNTWORKS*. The facility provides a venue to test the capabilities and limitations of all equipment in development, and under consideration for procurement, that will be delivered to the infantry squad. It focuses on human factors, ergonomics, and a systems engineering approach towards weight reduction and balanced loads. For the first time in the Marine Corps, human factors analysis is being applied to the physical integration of the infantry squad's equipment. The physiological, ergonomic, and performance impacts of fielding new equipment create a constant set of trade-offs between weight management, lethality, survivability, mobility, and sustainment. MERS highlights these trade-offs and refines solutions that incorporate the capabilities of the Marine rifle squad as an integrated system.

Conclusion

The best weapon in the Marine Corps is the well trained and equipped Marine. As we outfit our forces with the latest in protective technology, we continue to strive towards an optimal combat load that allows the individual warfighter to accomplish the mission at hand. Our goal is to provide your Marines with technologically advanced equipment that enables them to achieve an ideal combat load, one that allows them to remain lethal and healthy, while increasing their survivability and mobility on the battlefield. With your support, we continue to procure the very best equipment industry has to offer.

We recognize that these next few years will be challenging. The Marine Corps must rapidly adapt to broad strategic conditions and wide-ranging threats. We remain faithful to our enduring mission—to be where and when our country needs us and to prevail over whatever

challenges we face. We achieve this by recruiting and retaining the best of our Nation's sons and daughters, training them in tough, realistic scenarios and providing them the best equipment available. With your continued support, your Corps will remain the Nation's force in readiness and continue to fulfill its mission of being "*most ready when the Nation is least ready*."

WEIGHT OF BODY ARMOR

Mr. YOUNG. Madam Chairman, I wonder if you could invite the soldiers with their heavy equipment to take a seat and lighten their load a little bit.

General CHIARELLI. If it is okay with you, sir, could we, before they sit down, explain what you see here very quickly? I will use the soldier, Staff Sergeant Fred Rowe. Fred is from Greenville, Kentucky. He is married and currently doesn't have any kids. He has been assigned to both the 82nd and is currently assigned to the 101st preparing for a deployment to Afghanistan. He has been to Iraq twice on two deployments. This will be his first to Afghanistan. And on his second deployment to Iraq, he took three rounds to the chest and got up and completed the mission, which shows you the quality of protection provided by these plates.

We asked Staff Sergeant Rowe to wear the full-up, what the Army calls the improved outer tactical vest with the SAPI plates front and rear, plus SAPI plates on the side. His, without all the other accoutrements, because it is a size medium, weighs 30 pounds. To give you an example, if we were to move up to a size large, like I would wear, I would be carrying an extra 3.2 pounds, because of the extra weight of the plates, up to 33.2 pounds. But this is the full-up gear right here that provides the best protection over the largest portion of the body that both the Marines and the Army have at this time.

Ms. KAPTUR. General Chiarelli, what is the total weight of equipment that Sergeant Rowe is carrying right now? I notice he doesn't have on the optical scanner and some of the other things.

General CHIARELLI. I did not totally weigh his ruck.

Sergeant ROWE. Depending on the mission, ma'am, my kit has weighed up to about 98 pounds at one time, depending on the mission. Sometimes it is about 70 pounds. But with ammunition, grenades, flashbangs and all the other equipment, it is going to be over 70 pounds every time that you go outside the wire. On an extended mission during a surge, my kit weighs just shy of 100 pounds.

Ms. KAPTUR. Thank you. Thank you for that.

To your knowledge, Sergeant Rowe, have the soldiers ever been asked about equipment loads in your career? Do you ever get a survey or anybody talk to you about what could we do to lighten your load?

Sergeant ROWE. Yes, ma'am. I have actually taken a survey multiple times. I think in the survey it asked if you would accept the responsibility of having like a plate carrier or something lighter that doesn't have as much flak protection from the shrapnel and 9-mils. And as far as I know, every person that has ever worn the kit that we had to wear has checked "yes" in their block.

Mr. YOUNG. Sergeant, your experience in Iraq when you were hunting down or pursuing a terrorist, he was moving pretty light, I understand, he didn't carry the heavy load because he hit and run. How much restriction is there on you in pursuing that bad guy and hunting him down?

Sergeant ROWE. Most of the time I was in Iraq, sir, I was a sniper, and we weren't actually chasing people down. But when I was

an infantry squad leader, we would react to contacts, and if the individual is not in your line of sight, basically if you can't just see him right away in the street within 100 yards or so, you can't pursue. You would have to go ahead and stand your ground and maintain what you have, because there is no way that you will ever catch them.

Mr. YOUNG. I bet you couldn't do the 100-yard dash in 10 seconds, could you?

Sergeant ROWE. No, sir.

Mr. YOUNG. Thank you for what you have done and what you will continue to do. We appreciate your service to our country.

Sergeant ROWE. I am happy to do it, sir.

Mr. ROTHMAN. Would it be possible for the soldier to describe from bottom to top what he is wearing?

Ms. KAPTUR. Certainly, certainly.

Sergeant ROWE. Well, we start out with the desert boot, sir. And depending on the terrain, we have five different pairs of boots that you can wear, and some of them can actually be pretty heavy. If you are walking on concrete, they are going to have a thicker sole. They are about a pound heavier each.

Then you go to the pads. We have insert pads that we could be wearing, but we have the outer knee pads and elbow pads that are mandatory for you to wear. They have better protection, but it gets a little restrictive. He was talking about chasing down someone. Whenever you can't even move your arms or legs it is pretty hard to run. When you move up, then you have your groin protector, which is a 9-mil flak, as well as around your neck, and pretty much everything around the plates.

When you move up the vest, you have usually some kind of a harness that holds all your magazines and pouches over top of your armored vest; and, depending on the mission, what ammo you are going to take, how many grenades you are going to take, or whatever equipment you are going to have. Always your survivability kit, first aid. And then you also have your vest which has—as the general was saying, depending on your size it can go up between—probably about 5 pounds, sir. And then lastly you have your ACH helmet, which is a lot lighter than the ones we had in the past.

Mr. ROTHMAN. And what is on your back?

Sergeant ROWE. This is an over daypack, sir. This is what we call an assault bag. You can't really fit a whole lot more than just a MRE and maybe a little water or extra ammunition in it.

Mr. ROTHMAN. How much water do you carry?

Sergeant ROWE. Depending on how long you are going to go out, sir. Normally we have to have at least 4 quarts on us at any time. But if you are going to go out for a day or 2 days or a week, then you are going to have to pack up your trucks and carry more water in your bags, just depending on the mission and how long you are going to be out.

Mr. ROTHMAN. Thank you, Madam Chair.

SCALABLE BODY ARMOR

Ms. KAPTUR. Thank you, Mr. Rothman, very much.

I was going to ask, Sergeant Rowe, if you step a little bit to your right we are going to ask General Amos to introduce your guest

from the Corps, and I know Congressman Frelinghuysen has the next question.

General AMOS. Sergeant Harres, come on up here.

Ma'am, this is Sergeant Harres, Infantry Marine and squad leader, two combat tours, 1st Battalion, 6th Marines, both of them in Iraq. And he is wearing what we call the scalable armor. Now, we did our best to try to put the same equipment on the vest itself, but you will notice that the vest that he is wearing provides him a lot more opportunity to move. And so what this has done, this was an attempt about a year and a half ago to develop an opportunity to divest yourself of some of the heavy equipment and protection, and recognizing up in the mountains of Afghanistan, in the hot temperatures and high attitude, you need to be able to move just exactly for the very reason that Congressman Young talked about.

So this is a scalable vest. It is called a plate carrier. It has the same enhanced small-arms protective plate in the front, one in the back, just the same way as his vest does. It has the plates on the side. If you would point to the side SAPI plates. Those just attach off and on, and that is an outshoot of about the last 3 years of combat in Iraq, understanding that the snipers would shoot at the sides. So we put those on there. This thing is significantly lighter. It is about another 10 to 15 pounds lighter than what we have over here, and we are issuing that now to the Marines in Afghanistan. And again, we are allowing the commander to make the call.

We have a full vest that we did not bring, very, very similar to this vest. It weighs 33½ pounds. It looks exactly like this except it has got Marine tan. So we have that capability, and we provide that protection.

Most of our Marines in Iraq right now are wearing a heavier gear. This an acknowledgement that if we can scale and allow the commander to pick the right armor, depending on what the situation is, then he is more apt to be able to maneuver in high attitudes and high temperatures.

Sergeant Harres, do you have anything you want to talk about about your personal——

Sergeant HARRES. When I was in Iraq, we had the full flak, which when we were able to adapt to it, I thought it was fine. Once I moved to the plate holder, like the General said, you are able to move freely. On our recent trip to Iraq and Afghanistan we had to use them. It doesn't offer necessarily as much protection, but up in the hills of the Afghanistan mountains, it will definitely will be a lot better to use, I think.

FIRE-RESISTANT ORGANIZATIONAL GEAR

General AMOS. One of the things that you will see, you will notice on Sergeant Harres, he has got kind of a strange-looking shirt on. That was developed about 2 years ago as a result of our Marines being burned when the IEDs would go off. And we ended up with a lot of Marines on their hands, neck, body being burned. And you would see it down at Brooke Army Hospital. So the Marine Corps Systems Command developed and did a rush. We really worked very quickly to develop what they call FROG gear, which is fire-resistant organizational gear, and it now has it for the shirt.

We have got a thing we put over our—a balaclava we put over our head. And we have got Nomex gloves. And the whole idea is to reduce the burning in the event of a vehicle IED mishap.

So we have gone to that. And, in fact, you will find a lot of Marines wearing aviation flight suits right now, because they are Nomex, on patrol in Iraq. They like them because they are fire resistant.

Ms. KAPTUR. Congressman Frelinghuysen.

ADJUSTING LEVELS OF PROTECTION

Mr. FRELINGHUYSEN. It is 130 degrees in Iraq, and you are an Army sniper, and let us say you are a Marine sniper. Do you have the flexibility on your own to reduce the amount of gear you have so you can actually maneuver? It is pretty damn difficult to fire a rifle if you can barely move your arms. I just wondered do you have that flexibility, or is there some greater God in terms of a unitary policy that you have to obey, both the Marines as well as the Army? Do you have some ability to adapt?

Sergeant ROWE. No, sir. You are not allowed to shed gear, so to speak. In the past I have done it to adapt to the mission and to get on my belly, hide on the desert to be able to make that shot. I have done that. It is not allowed.

You can't shed gear because, as the general was saying, the commander is trying to protect their soldiers, and they don't want to have to answer for that. That is why we as soldiers would like to go to something like that that allows us to be more mobile and versatile so that we wouldn't have to shed our gear. We would wear everything at the same time to accomplish position.

General CHIARELLI. And that is exactly what we want to go to is that same capability to do that. But I will tell you, in 2006, since we are talking about snipers, the snipers were, in fact, aiming for the femoral artery of the leg even wearing this gear in order that they could get a soldier to bleed out. So the thought in 2006 of shedding this kind of protection for something less, you would be putting your soldiers' lives at risk. I think most commanders would power this down to company commanders, particularly in Afghanistan, to make that call based on an enemy situation as to when they can shed gear and go to a plate carrier because the situation allows it.

Mr. FRELINGHUYSEN. Thank you both for your service.

Thank you, Madam Chair.

EQUIPMENT WEIGHT

Ms. KAPTUR. Thank you.

I think I would like to hold questions for the moment. We would like to ask our guests to please be seated. And while they are doing that, General Amos and General Chiarelli, what is the total potential weight that each soldier or marine would have to carry; what is the potential total weight?

General AMOS. I have got some actual figures here. We have a battalion that just came back from Afghanistan about 3 months ago, 2nd Battalion, 7th Marines. And in an effort to try to capture what their weights were, we sent a Marine Corps lessons learned team over to Afghanistan and actually weighed these guys and say,

okay, put them on a scale with what they typically wore. And the lightest was the squad leader. So that was the Marine that was in charge, typically a sergeant like Sergeant Harres, that was wearing 78.94 pounds of gear. The mortarman was the heaviest in that squad, and he was wearing 142.26 pounds of gear.

Now, there is an old military historian by the name of S.L.A. Marshall, who many, many years ago said an infantryman should never wear more than 50 percent of his body weight. So this mortarman that is wearing 142.26 pounds, when you think about how much he probably typically weighed, maybe 170, 180 pounds, and you go back to what S.L.A. Marshall talked about, this has been a problem for infantrymen, to be honest with you, all the way back to the days of Alexander the Great, and it is a problem, and it is something we are struggling with.

But I will tell you from the services side of the house, there is no slack in effort to try to capture as much advanced technology that is out there to lighten the load. And we can talk about this in this hearing, we can talk about initiatives that are under way right now to lighten a load, but there is no shortage of money being spent from the science and technology in the developmental world to try to get our Marines' and soldiers' loads down. And there are several initiatives which we can talk about.

Ms. KAPTUR. General Amos, do you want to proceed with any additional statement at this point?

General AMOS. I don't, ma'am, but I will be happy to answer any questions.

Pete, do you have anything on the weight?

General CHIARELLI. Our doctrinal fighting load is 48 pounds, and it can range from 48 pounds up to 120 pounds. We have done some looking at Afghanistan. The average fighting loads in Afghanistan are 63 pounds. I think that is basically what Sergeant Rowe indicated, maybe a lot lighter than in Afghanistan than they are in Iraq. And they vary from that 63 pounds up to 130 pounds.

I took a look at World War II fighting loads, and the difference between World War II fighting loads and the fighting loads I just cited just now is about the weight of the tactical vest you see right there. So what we have added since World War II in the amount of weight is basically in that IOTV with SAPI plates, but additional capabilities that our soldiers didn't have in World War II. So we are looking at an average load of 63 pounds in Afghanistan today.

REDUCING EQUIPMENT WEIGHT

Ms. KAPTUR. General Chiarelli, in your testimony submitted to the record, you indicate that in one study infantry soldiers carrying a load of 101 pounds for 12.5 miles had a decrease of 26 percent in marksmanship, being the number of targets that were hit; a 33 percent increase in the distance from the target center; and an increase in back pain compared to preload and march scores. And then a little bit later on it indicates in your testimony that a 72-pound load increased energy required by 40 percent on behalf of the soldier. And the time required to complete an obstacle course increases 10 to 15 percent for every additional 10 pounds carried.

My question to you really is what are we doing? I look down the list that every Member has gotten of equipment that is being car-

ried by our soldiers, and we put all this money into research, but the optical scope and illuminator, that is almost 9 pounds itself. What kind of dispatch is there to try to look at each piece of equipment and to try to halve its weight?

General CHIARELLI. We are working very hard at finding ways to lighten the load, I can promise you that. One of the things we are looking at is civilian off-the-shelf solutions to many of the things we do. And our rapid-equipping force is leading the way in the Army at finding some of those things that will lower the weight.

But I have to tell you, the advent of the SAPI plate is the mid-1990s. We fielded the first SAPI plates, ceramic plates, in early 2000. And the protection that they have provided and their ability to stop rounds is such that we have offered a level of protection to soldiers that they have never had on the battlefield. Our sergeant here would not be alive today if he did not have those SAPI plates on.

I made a trip up to ARL, our Army Research Laboratory, to see what they were doing to try to lighten those plates even further, and they told me, quite frankly, that it is going to take a lot more time given the improvement in ballistics which they have to stay up on.

We have come up with two improvements to the SAPI plates. We are on E–SAPI today, which provides more ballistic protection. It did not increase the weight, but it has more ballistic protection. But the technological chances of being able to cut that weight in half are still many years down the road when it comes to the plates themselves. But we are looking for other ways that we can do that.

I might mention, I totally agree with General Amos. Physical conditioning and—what we are finding through the University of Pittsburgh study that is being conducted—nutrition are key elements in helping soldiers when they have to carry these loads in avoiding the kind of musculoskeletal issues that we are seeing today.

Ms. KAPTUR. Could you please provide for the record, and then I am going to call on Mr. Young, a brief summary of each piece of equipment that the soldier is carrying or the Marine is carrying and the research under way to lighten that piece of equipment? I would be very grateful for that.

[The information follows:]

For over a half decade, the Army has initiated a number of programs to transform how individual Soldiers are equipped given their unique size, weight, power, and environmental considerations. There are well over 300 items that could be issued to the Soldier depending on their mission and where they would be deployed. Army investments impacting Soldier load include the following and are not all inclusive of Army efforts.

1. Clothing and Individual Equipment—There are numerous Army initiatives like rucksacks, flashlights, and sleeping bags. By using some Commercial Off the Shelf (COTS) items we are already lightening the Soldier's load by as much as 70% on individual items. Other clothing enhancements such as Extended Cold Weather Clothing System (ECWCS) provide cold weather protection made from light weight material that makes the ECWCS 7 lbs lighter than previous versions.

2. Lethality—There are numerous initiatives that will lighten the Soldiers load. Among the highlights are: The M240L lightweight machinegun which will reduce the weight of the M240B machinegun by 7.1 lbs, a savings of 26%. The use of the XM806 lightweight .50 caliber machinegun and tripod lessens the load by 64 lbs over the M2 machinegun and tripod, a savings of 50%. The switch from the M122

machinegun tripod to the M192 tripod will reduce the weight by 6.5 lbs, a savings of 34% on the M249 and M240B. The combination of optic sights and laser pointers will provide as much as a 34% savings (1.42 to .56 lbs) in Soldier load weight. Another area of Soldier load savings has been obtained in sensors and lasers, where the medium Thermal Weapons Sight was reduced 44% (5.0 lbs to 2.8 lbs).

3. Ammunition—Lightweight steel cased ammunition currently in development has demonstrated a weight savings of 25% over current 7.62mm ammunition. The Lightweight Small Arms Technology project is investigating new case telescoped ammunition which promises to save between 35 to 40% over current ammunition weight. Caseless telescoped ammunition is also under development and promises to save up to 50% (~7 lbs to ~4 lbs) of the ammunition weight along with 40% reduction in volume.

4. Soldier Protection—Technology development efforts are working toward weight reductions for body armor (vests and plates) and helmets through advances in fibers, textiles, and ceramics. High performance fibers with significantly increased tensile properties have the potential to provide weight savings of 30–40% of the fabric components of body armor. Lightweight ceramics is focused on increased multiple hit capability, improved durability, and the ability to form the ceramic plate into more complex shapes that can better conform to body shape and provide for increased mobility. Within the past 24 months alone, the Army has made improvements to the Soldier's Interceptor Body Armor system with the introduction of the Improved Outer Tactical Vest which reduces system weight by over 16% (18.6 lbs to 15.7 lbs). In addition, there are ongoing actions to evaluate a lighter tactical vest (plate carrier) for Soldier use. The purpose of the evaluation is to provide the operational commander with flexibility to use a plate carrier to adjust Soldier loads based on terrain conditions (patrolling in and around mountainous regions). Additionally, development of the new Enhanced Army Combat Helmet has the potential to provide another 10% reduction in weight from its predecessor while providing improved ballistic protection. The overall goal for the Army's S&T effort is to reduce body armor Soldier load by an estimated 10 lbs.

5. Power—Technology development efforts will achieve weight reductions for power sources through improved battery technology, hybrid power sources and battery charging systems. Lithium carbon monofluoride primary batteries have demonstrated a 2X reduction in weight through improvements in energy density compared to current primary batteries. Wearable, rechargeable Lithium-polymer batteries will conform to and mate with body armor and will achieve improved fightability. Hybrid power sources based on methanol fuel cells will reduce the number of batteries required for multi-day Soldier missions.

6. Combat Rations—The recently developed First Strike Ration, a compact, eat-on-the move, assault ration for consumption during initial periods of high intensity conflict, provides a 49% weight savings over a one day supply of MREs. Technology development efforts will achieve additional weight reductions for combat rations through the use of novel lightweight packaging materials and improvements on specialty rations.

Ms. KAPTUR. Mr. Young.

ROBOTIC VEHICLES

Mr. YOUNG. I want to thank the Chair. And we had discussed at a prior meeting the possibility of devising a system or procedures to provide UAV support or some robotic-type support for the fighter. For example, in here, what the sergeants are wearing, it doesn't include their weapons; it doesn't include a whole lot of ammunition; it doesn't include water that they might need for a couple of days; it doesn't include communications equipment, radios, night vision goggles, things of this type.

Is there any work being done by the Army Materiel Command in trying to devise a strategy or procedure or a method where the troops on the ground could be helped with some of this extra heavy load, what they need when they get to the fight, but they might not need getting to the fight?

AIRDROPS

General CHIARELLI. There is. First of all, we are looking at robotic vehicles as a way of being able to transfer that load from the soldier to a vehicle that would travel along with the soldier and carry a good piece of that. That technology is something we are looking at and testing right now.

But currently in Afghanistan—I will let Jim talk about UAVs and what they can do—we are using as a primary way to take this load off the soldier's back by use of airdrops. We deliver 26,000 pounds a day using airdrops, different airdrop technologies. And we have come up with technologies that are very, very accurate at half the cost of what they used to be and don't require soldiers to recover the components of the airdrop. Basically those things which bring that load to ground are discarded after the drop is made. So this is going a long way in helping us to get some of those pounds off our soldier's back. And we see the increase in airdrops as something that is proven to be very, very helpful in Afghanistan.

General AMOS. Sir, we also are using the airdrops, TRANSCOM General McNabb and all his airmen have done some remarkable work with precision airdrops using parafoils to try to get the stuff out so you don't have to either carry it along the highways of Afghanistan, which are becoming more and more IED-laden. I mean, that is an effort that is under way right now and works quite well.

About a year and a half ago, the Marine Corps commissioned a study by the Naval Research Advisory Committee on the issue of lightening the load, and after about 6 months of effort by some very renowned ladies and gentlemen across our country going into industry and into all the S&T developmental parts of the world and then going back into history, they came out and they said, look, we are probably right now at about as far along as we can be with current technology as we know it today with regards to being able to lighten things like the SAPI plate, small-arms protective plate. We need new technology to be able to get that thing lighter. But they said, there is other ways that you can lighten a load. One is weight redistribution; in other words, the actual weight. It is a bit of a ruse, but it actually works. You can redistribute the weight and get it more over your hips and therefore feel like you can actually lift yourself better and maneuver better. So that is one way.

The other piece of it was get it off the Marine or the soldier and get it onto something else that actually can carry it for you. The front cover of our Marine Corps Gazette this month has a picture of a Marine up in the mountains of eastern California at our Mountain Warfare Training Center loading up mules. Now, I realize that is not new technology, but we actually teach a course for Marines how to load mules, and we use it in places like Afghanistan. So at the very bottom of the food chain, that would be the basic way you would transfer loads.

CARGO UNMANNED AIRVEHICLE

But what we are looking at right now, and what is a near-term requirement is the whole idea of a cargo UAV. And if you can imagine, we are pretty successful with UAVs now. We like them.

We have got little ones, and we go all the way up to the big ones. But nothing is out there to haul stuff around the battlefield.

A year ago we had a battalion engaged in Afghanistan, and a company got into a heck of a fight, and it was in the summertime, it was hot. We had one opportunity to resupply them. And I remember reading the report, the spot report, from the company commander, and he had a choice between getting—being resupplied with water or being resupplied with ammunition. And it was at that point we said, we have got to do better than this. And so the concept of a cargo UAV was born.

And right now the whole idea would be we are going to get something off the shelf within the next—hopefully the next 3 to 4 months. We had an Industry Day last week within the Marine Corps and brought in folks that had these commercial off-the-shelf UAVs that are out there, and can it be modified to carry cargo, somewhere anywhere between 500 pounds to probably 1,250, 1,500 pounds. Take off vertically, precision, set it down, drop it off, then go to the next stop. Redo it all day, all night. UAVs aren't afraid to fly at night. They just go up by themselves and do it.

That is where we are headed. We want to get a solution now to get into Afghanistan this summer. And then we have a program where we are looking for something that would be optimum for the future; an expendable, low-cost, precision UAV to be able to carry an unmanned aerial vehicle—excuse me, logistics. So you are going to hear more of that as we find out what we are going to do, but we are committed to getting that for this coming summer.

ROBOTIC CARGO VEHICLES

The other thing is what General Chiarelli was talking about is DARPA has a project they call Big Dog, and it was a robot. It looked about the size of a Great Dane, and it had robotic legs, and it had a gasoline-powered motor on it, and it had gyro-stabilized legs, and it could climb up. And the whole idea is to shed weight on this thing. They have taken that now to the next level, and I was briefed on it about 2 weeks ago, and I think there is great potential.

We won't see that this month, but we hopefully will see that sometime in the next 24 months where you can imagine a squad with one of those robotic dogs, quiet, completely self-contained, where you can put 300 or 400 pounds on this thing, and it will just follow you along, like my Labrador Retriever does today. So there is a lot of effort going on to try to shed the weight onto something else.

Mr. YOUNG. General, thank you very much for enlightening us about the newest technology of the mules. Whatever works.

Madam Chairman, you have got a good attendance today, so I am going to yield back my time so other Members can take part in this hearing.

Ms. KAPTUR. Thank you, Mr. Young.

Mr. Visclosky.

INJURIES DUE TO WEIGHT

Mr. VISCLOSKY. Thank you, Madam Chair. Just two questions. There is a wide range as far as the weight a troop carries. Is there

a weight beyond which frequency of injuries grows dramatically? Is there some threshold where suddenly you are seeing a lot more injuries to our troops because of the weight?

General AMOS. Sir, I don't have that information. I would say intuitively obviously the higher we get up these weights that I talked to you about in the 2nd Battalion, 7th Marines, 140 pounds, there is absolutely no question that you might be able to carry that around the street, but when you start going up mountains, you can't do it. You stop hopping in and out of MRAPs, step down from an MRAP that sits 2½ to 3 feet high off the ground.

Mr. VISCLOSKY. And you get shot at.

General AMOS. Absolutely.

Intuitively there is a threshold, but I don't know precisely what it would be. I don't know that we have that kind of information.

Mr. VISCLOSKY. I assume there would be some variation between the size of the actual soldier, airman and the load they are carrying, too. I was just wondering if suddenly you are seeing some incremental increase along a certain threshold.

One other question. For those who are our enemies, what is their basic load, if there is such a thing? My impression is it is relatively light, but I do not know.

Mr. MORAN. It is the weight of a weapon. That is about it.

General CHIARELLI. That is about it, the weight of the weapon. They do not have protective gear. But their casualties are much higher than ours, and their effectiveness is not as great as ours because of their lack of the equipment and the protection we are able to provide our soldiers and Marines.

Mr. VISCLOSKY. I assume there is some advantages. Understanding they have higher casualties, and there are other things we can do to compensate for the lack of mobility because of the amount of weight our troops are carrying, what advantage do they have because they are so light?

General CHIARELLI. I think that is why we are both looking at it different ways, so we can lighten the load, and particularly move to a plate carrier where the enemy situation allows you to do that without putting the soldier or Marine at greater risk than you are willing to accept and that he is willing to accept given the enemy situation.

Mr. VISCLOSKY. I wish you well. I just can't imagine how terrifying it is. You are in combat, you are risking your life, you are carrying this, and then to find that right adjustment. And I honest to God wish you well, and whatever we can do to help. I appreciate it.

General AMOS. And it is a balance, sir. The flip side of it is if you talk to our staff sergeant and the sergeant that were in heavy combat, they would tell you that there were times when they absolutely would not have wanted to shed any of the stuff that they were wearing because the threat dictated that if you are riding around in the back of an MRAP or an up-armored Humvee in an area that is known for IEDs, most of the soldiers and Marines, I would say, would rather have that stuff on than a plate carrier, because a plate carrier covers significantly less of your body. So there are times when they absolutely want to have that kind of coverage.

And as General Chiarelli was talking about, in 2006, General Brogan, who is sitting behind me, as a result of an Urgent UNS, developed ARB, what we now wear, our big vest, a modular tactical vest. And the whole idea was countersniper. It was the shots coming in the neck, the shots coming in under the arms, the shots coming into the hips. And so we did a rapid turnaround to develop this thing. Now it is bigger and bulky. It is just like their vest, but it had a purpose. And the whole idea now is if we can give the commander on the ground the opportunity to make decisions on how much or how little, then I think that is absolutely where we need to go. But we value life a lot more than our enemy does, and the last thing we want to do is send a young soldier or Marine home because of maybe a lack of irresponsibility or a lack of responsibility on our part. So it is a balance.

Mr. VISCLOSKY. Thank you very much for your service.

Ms. KAPTUR. Mr. Frelinghuysen.

WEIGHT OF MACHINE GUNS

Mr. FRELINGHUYSEN. Gentlemen, we have made some progress in terms of the weight of soldier weapons. I respect Picatinny Arsenal. They just lowered the weight of the .50-caliber machine gun, doing some things relative to the weight of barrels, the ammo, the clips for ammo, I guess they call it plasticize, use of titanium. Are you satisfied we are making enough progress in that area? Perhaps General Chiarelli.

General CHIARELLI. I think that is one of the areas that really shows a tremendous opportunity to make some real reductions in weight. We found in the Special Operations community an M240 machine gun, which I think most of you know is a pretty good-size machine gun. Special Operators had had this weight problem. With the standard one we issue our soldiers, they had developed, and I believe it came out of Picatinny, a weapon that was 9 pounds lighter. When you can shed 9 pounds on a machine gun like that, that is a tremendous weight savings. We have issued 100 of them and have another 500 on order to get out to our soldiers in Afghanistan.

The same thing with the M249, commonly called the SAW. They have been able to shave off an additional 2 pounds off of it and make it much lighter.

Picatinny is working on caseless ammo, I know, and that shows a great future, because if you could get rid of that brass on every single round of ammunition you carry, you could shed more load. The issue with that, of course, is we will have to move to something other than the M4, because it, as I understand it, will not fire caseless ammo. But those are the kinds of things that I see that show great promise for helping us lighten that load.

CARGO UNMANNED AERIAL VEHICLES

Mr. FRELINGHUYSEN. On just getting back to the use of UAVs, the cargo, I assume the larger the UAV, perhaps the greater opportunity for the enemy to detect what we are using. How are we dealing with those types of issues? And I assume you get the conditions on the ground. I am talking more about Afghanistan here where you have a brownout, and you would have a similar sort of situa-

tion, whether you have the opportunity to bring in water or ammo. I just wonder what sort of progress are we making with the UAVs.

General AMOS. Sir, right now we don't have one in theater right now. We have UAVs, but we don't have a cargo UAV. And as a result of this Industry Day that we had a week ago, we are trying to sort out, okay, what is out there now that is already made so that we can capitalize on that.

Mr. FRELINGHUYSEN. Sir, one has to assume obviously the Special Operators are getting stuff in, but they are using conventional airdrops.

General CHIARELLI. I think they are using most of the airdrops and some of the airdrop technology that has been brought on board in Afghanistan.

Mr. FRELINGHUYSEN. UAVs are on the drawing board, the cargo?

General AMOS. Sir, they are from the sense of what we would really like to have in the future. That is the one that is—those are kind of under development. But the near-term itch, which is the forces in Afghanistan right now, I am looking for something more than a developmental solution, I am looking for something now.

Mr. FRELINGHUYSEN. We can't wait.

General AMOS. We can't wait, and for all the reasons we talked about. We don't know how big this is. We don't what we are going to decide on. I have seen pictures of ones, I have seen them, that are as big as this room, and I have seen smaller ones.

Ideally what you would like to have is something that is small, that is quiet, that can carry this load of 500 to 1,200 pounds. And that is where we are going for right now. We just don't know. There are some small commercial helicopters, some very small ones, that we have companies looking can they modify that to fly it remote control, just like we do all our other UAVs, hand them off as it moves into theater, moves farther downrange, and then take control at the receiving station and then just land the thing. And the good thing about that is even in a dust storm, a UAV can land by itself. It is not like me as a pilot where you get nervous in a brownout. We don't have it yet, but we hope to have it and introduce it this coming summer. That is where we are headed.

Mr. FRELINGHUYSEN. Excellent.

Thank you, Madam Chair.

Ms. KAPTUR. Thank you, Mr. Frelinghuysen.

Mr. Moran.

COMBAT LOAD

Mr. MORAN. Thank you very much, Ms. Kaptur. And we thank you for chairing a meeting from two such distinguished military leaders, and I have great respect for both of you. In fact, General Amos, I was pretty impressed.

I mentioned to General Amos late in the afternoon yesterday that my nephew, who is in the Marine Corps, was complaining because he was sent to New River on financial management because of some dumb Appropriations Committee that wanted more financial management people in the Marines, so he got stuck with that. So I mention it, and today he is in Iraq fighting. You know, it is conceivable it could be coincidence, but I just gave all the credit to you. I was really impressed.

In our briefing where we are told that we have about 20,000 soldiers that are nondeployable—I think that was in your testimony, General Chiarelli—largely because of bone and muscle injuries, and it is increasing, it seems fairly dramatically, about 10 percent annually, it appears. Now, the explanation, it says that you are planning on lessening equipment loads, improving conditioning, providing new load-carrying capacity, technology, et cetera.

I don't think any of us think that the problem is one of the human endurance of the soldiers, but it is probably more the human judgment of their superiors that—yourselves excluded, obviously. I wouldn't say it because I know you do a fine job. But I think over time we have loaded them up. And I suspect I am not alone in this. It is too much; 100 pounds is too much to be carrying on a regular basis, let alone 140. In terms of maneuverability, adaptability and just what the human body is capable of bearing over long period of time, it is too much.

And I believe you when you say we are working on lightening it, but we have been in Afghanistan for 7 years, we have been in Iraq for almost 6, and it seems to be going in the other direction. Now, maybe we are part of the problem. I mean, I have got a question here about are you trying some of the new sniper technology that is put on vehicles but could be put on soldiers individually that detects where sniper fire came from? I mean, that is new technology. But gosh, in this context of that much weight having to be carried by individual soldiers, I can't imagine adding anything to it no matter how helpful that technology was. And yet we are talking about radios, we are talking about any number of other things that just seem at some point counterproductive.

You wonder in a platoon if we couldn't share some of the load, that if everybody has to—I mean, if we come up with radios, obviously not everybody needs to carry the radio. If you were to use sniper technology, not everybody needs to have that, et cetera.

I know you have thought about this, and I don't want to belabor the point, and it has been pretty much the thrust of everybody's question, but we are concerned, I think legitimately so.

RECRUITING STANDARDS

Let me ask a question, though, about the Army fitness levels, General Chiarelli, because that is where we read the articles. They apply primarily to the Army apparently. We have made accommodations for prior, I don't want to say—I guess felony records, although I don't think it is so much felony, but brushes with the law and so on. We apparently have relaxed those standards. We have relaxed some of our educational standards we read. But we have too many soldiers who are being rejected for reasons of obesity.

Now, I was asking some of the folks about that, and they said, well, one of the problems is not just obesity, but we have a cookie-cutter approach. We take the weight and the height, and that determines whether somebody is eligible or not.

One of the things that disturbed me, a young man I know who is a ballplayer, really well conditioned, he can run a sub-5-minute mile, but he was rejected because he was too heavy even though it was all muscle. Now, that was ROTC, so I don't know that that applies to regular standards, but if it does, it seems to me we need

some flexibility; that the Body Mass Index, the conditioning, that needs to really be what we are looking at and not just some standard criteria, simplistic criteria really. My son is 6–6, he weighs 290 pounds, but he has got a 33-inch waist. You can't pinch his skin anyplace, but he is over your criteria. He would be labeled as obese, and he is anything but.

General Chiarelli, do you have that kind of flexibility in determining how we define obesity?

General CHIARELLI. We do. And the regulation uses height and weight as a screening tool only. Body fat is the final determinant on whether or not we feel that you are obese and do not meet Army standards. So anyone who would only use height and weight and use that alone to disqualify an individual from service, that would not be in keeping with the regulation as I last read it, which requires that only as a screening tool. But body fat is the final determinant on whether or not you are obese.

Mr. MORAN. Well, maybe ROTC has different criteria that are not wholly consistent with regular enlistment. But you guys are doing a great job. This is not a hearing to be critical, but it is an opportunity to register concern. We are asking too much of our soldiers when they are having to carry that much heavy equipment. It is wrong, it has got to change, we have got to figure out a way to lighten their load. Thanks.

Ms. KAPTUR. Thank you, Mr. Moran.

General CHIARELLI. May I apologize and just make a qualification?

NONDEPLOYABLE STATUS

Ms. KAPTUR. General, please.

General CHIARELLI. On our statement that we have 20,000 nondeployable soldiers, that is correct on any given day, plus or minus. But if I in any way inferred that those are all due to musculoskeletal issues, I apologize, because that is not my intent. We currently have 10,000 soldiers in warrior transition units who are nondeployable who are injured in combat or have very complex medical cases. And then we have another 10,000 soldiers who, for whatever reasons, are nondeployable, and a small fraction of those are musculoskeletal issues we are seeing coming out of Afghanistan. We just see that as a portion that we need to attack to get at this issue of nondeployability. But even if we were able to eliminate all of those, it would be a small fraction of the 20,000 that we have that are nondeployable.

Mr. MORAN. I think our testimony said many of these 20,000, so I thank you for that clarification.

REDUCING EQUIPMENT WEIGHT

Ms. KAPTUR. Thank you for the clarification.

Both generals, can we assume that the contractors who provide all this equipment are under direction by each of you to reduce the weight, that there is ongoing effort, in each piece of equipment? Can we assume that or not?

General AMOS. Ma'am, we, the contractor will respond to the amount of pressure directly applied to them. And what we do when we are, when we are developing a piece of equipment, for instance

the scalable plate carrier, we sit down, and we will work with them when the contractor—we actually particularly go out and we will say, okay, this is the requirement, and then we will get some bids in and then we will pick the prime contractor. And the prime contractor then will have to meet the specifications of the contract. So we actually work with them.

For instance, we have got kind of a warfighting lab, but we have got a Marine Expeditionary Rifle Squad Group of folks, kinds of a skunks works that deals specifically with making sure the stuff we buy is as light as we possibly can get it, and it fits well where it is supposed to fit on the body. And we try that out on Marines.

So the answer is, they are. They are not actually just turned loose to just give us what they have and we accept it. We force the issue on trying to get the very latest amount, everything from just shedding pieces of this kind of Kevlar web gear to get it down to a weight that we think is the very least but yet provides the minimum amount of protection that was required. So we do that, ma'am. We don't turn the contractors loose on this thing. They actually have to live up to our standards.

Ms. KAPTUR. Well, I would hope that in communications with them, that, you know, you would reemphasize in written form your strong efforts to try to reduce the weight, whether it is the material, whether it is metals, whatever it is, I would think that that would be a very useful effort.

General.

General CHIARELLI. We, too, are looking for solutions to this, not only in our laboratories but with commercial off-the-shelf pieces.

I was given two charts prior to the hearing where we are down to, as Sergeant Rowe talked about his knee pads, we are looking at a brand new knee pad now that will save 8-ounces over the current knee pads that he wears. I have got two pages of all those items, from boots to knee pads to compasses to sights to flashlights, where we are looking at different ways that we can procure equipment, both developed in our labs but also commercial off-the-shelf that will lighten that load. And we are literally looking at reductions of ounces to try to, in the smallest pieces of equipment, to try to get a cumulative good for the soldier.

Ms. KAPTUR. Thank you both. That is very encouraging.

Mr. Kingston.

Mr. KINGSTON. Thank you, Madam Chairman.

General, you mentioned earlier that you were looking at an off-the-shelf solution in some of those equipment. What would be some of those items that you were talking about?

General CHIARELLI. Boots, sir, knee pads, flashlights, angle-head flashlights, assure-fire magazines. You can reduce weight quite a bit with magazines. We have found a magazine that over the load 8.8 ounces possibility.

Mr. KINGSTON. And you are referring to retail purchasing?

General CHIARELLI. Some of this is commercial off-the-shelf that is produced.

Mr. KINGSTON. And that is a fairly attractive product to you then, right?

General CHIARELLI. It is.

RAPID EQUIPPING FORCE

Mr. KINGSTON. And what kind of procurement problems does that create?

General CHIARELLI. We have the Rapid Equipping Force established at the beginning of the war that we use extensively to go and find those technologies. They have individuals down range. And I think, as Sergeant Rowe mentioned, he indicated he filled out some surveys. I would bet that some of those surveys were from our Rapid Equipping Force, asking soldiers what are the pieces of equipment that you would like to see lightened? How can we help you out? What do you need that is better?

And they go to our labs to look for solutions, and many times they find them there. They go to the Special Operations community. They go cross service to make sure that there is not something in another service that we are not aware of. I gave you the example of Special Operations and the 240 machine gun. That was found by our Rapid Equipping Force. And they look for commercial off-the-shelf items to lighten that load.

Mr. KINGSTON. If you found a commercial flashlight that was better than the one you are using and it was universally accepted among the soldiers, how hard is it for you to move towards, let's just get rid of the old flashlight and buy this new one? How difficult is that to do? How much red tape do you encounter?

General CHIARELLI. Today that is something we can do rather rapidly with the Rapid Equipping Force.

Mr. KINGSTON. So the Rapid Equipping Force, it is working fairly well?

General CHIARELLI. Very well.

Mr. KINGSTON. Are there any suggestions for changes and improvement?

General CHIARELLI. Well, I worry at times that, with the loss of supplementals, that we will not have the funds that we need sometimes to ensure that they have the money that they need. And believe me, they follow all the procurement rules. They even have a PEO that oversees what they are doing. But they can move rather rapidly through the system. So I worry that, at times, unless we look at some procurement reform, organizations like our Rapid Equipping Force and the Army Asymmetric Warfare Group may have problems doing their job.

Mr. KINGSTON. I haven't read your testimony. I have scanned bits and pieces of it, but I don't see that in here as you are underscoring the importance of that kind of flexibility. Is it in here?

General CHIARELLI. I believe it is, sir.

Mr. KINGSTON. Okay.

General CHIARELLI. We talk about the REF.

Mr. KINGSTON. Okay. Because I think it is very important for Members of Congress to know that you do need to have that flexibility, because I remember one time General Meigs, when he was in charge of the Joint IED Task Force, he said that you have got to keep in mind we are competing against every Radio Shack product that is out there in the commercial world, and we have to stay ahead of them. Only we have to buy through the government and sometimes that slows us down. And so I think that we need to un-

derstand that in order for you to have as many choices of products as possible, you have to consider these commercial things and have the flexibility to move on them.

General CHIARELLI. It is absolutely amazing what this task force has been able to do. They are able to fill 60 percent of those things that soldiers ask for in less than a year, 60 percent. And 40 percent, the other 40 percent is under 2 years. That is 90 individuals I have in that task force. We purposely kept it small. And most of them are forward in the field collecting data from soldiers and finding out how we can get them the things that they need.

Mr. KINGSTON. Well, if there is anything else you want to add to your testimony, you certainly can do that for the record. What page is it on?

General CHIARELLI. Thank you, sir. I promise you I will review my testimony, make sure I have given you a fair explanation of REF, and if there is more information I can provide, I will provide it and get it to the Committee as soon as I can.

[The information follows:]

The REF helps address specific capability shortfalls by canvassing government, industry, academia, and the scientific community for existing or emerging technologies. It provides limited quantities of the best available off-the-shelf equipment to the Warfighter as quickly as possible.

Among the many items REF has provided to units in theater are remotely-operated cameras that assist with force protection at Forward Operating Bases and Combat Operating Posts; IED and other explosive material detectors that help our Soldiers defeat IED threats; improved ballistic protection for military vehicles that increases survivability; and lighter machine guns in Afghanistan that are helping to reduce the weight of a Soldier's Load.

To give you a perspective of recent initiatives coming out of the REF: in September 2008, during a visit to a brigade combat team (BCT) in Operation Enduring Freedom (OEF), the REF received requests to lighten the load of Soldiers operating in extreme elevations greater than 6,000 feet. REF formed an Integrated Product Team (IPT) in October 2008 with Program Executive Office (PEO) Soldier, the Asymmetric Warfare Group (AWG), Army Test and Evaluation Command (ATEC), and the Army Infantry Center to develop solutions. Within 47 days, the IPT identified, coordinated, and obtained from U.S. Special Operations Command 104 lightweight machine guns and delivered the weapons to the requesting BCT in OEF with user training provided by Crane Naval Surface Center and the AWG. These weapons decreased the Soldier's load by up to 9 pounds. Concurrent to this effort, an AWG field team helped the BCT craft an Operational Needs Statements (ONS) focusing on lighter body armor.

Simultaneously, AWG developed a formal assessment plan in partnership with Johns Hopkins University to prove or disprove the hypothesis that weight impacts on a Soldier's performance with regard to suitability, survivability, lethality, and maneuverability. The assessment takes a holistic look at the Soldier as a system and focuses on the implications and effects of lightening the Soldier's load, rather than assessing individual pieces of equipment.

When REF received the approved ONS from the warfighting commander, the organization coordinated with PEO Soldier and the Army Staff; and, REF is now working with AWG and the IPT to provide a BCT in OEF with lightweight body armor and 14 additional pieces of equipment. These items, combined with the lightweight machine guns and lightweight body armor, have the potential to decrease a Soldier's load further by 14 to 23 pounds. Once completely employed, this equipment will be assessed in OEF by AWG, ATEC, and BCT personnel and the results—good or bad—will inform future REF equipping actions and Army fielding decisions.

Mr. KINGSTON. Okay. Thank you, General.

Thank you.

Ms. KAPTUR. Thank you very much.

Mr. Rothman.

Mr. ROTHMAN. Thank you, Madam Chairman.

Generals, thank you for your service. I have lots of questions. Just to put some of this in context, is there a better equipped fighting force in the world than ours?

General AMOS. Sir, that is absolutely a resounding no. There is not.

General CHIARELLI. Totally agree.

Mr. ROTHMAN. Next. Just to put this in context, additional context, it is really critical, General Chiarelli, for us to receive that percentage of nondeployed units who are there because of these kind of stress and ergonomic injuries, so if we could get that for the record, that is critical, because we are here. And listen, we are all parents or concerned people who care about our kids and grandkids and certainly our soldiers and Marines and everyone fighting for us. We don't want them to carry any more than they need to do their mission and survive. But the balance is between flexibility of force, survivability, and mission accomplished. So how badly are our forces suffering, so to speak, because of this great burden of equipment? And how is it being manifested, either in, or rather, reflected in failure of mission, compromise of mission, and nondeployed units?

So we have to know what we are giving up because, obviously, if we have a finite sum in our budget, should we be pouring it all into a cheaper, lighter rucksack or some other training, pay, benefits, whatever other need we have to address. So if we can get that for the record, sir, that would be great. Unless you have a better answer than you just gave Mr. Moran.

General CHIARELLI. I don't believe I do. And I don't believe at this time I am going to be able to provide you the level of precision you want in trying to determine that. I was briefed last night about work being done by the University of Pittsburgh with the 101st where Sergeant Rowe will go. It is work like that that is going to get us to that finite number, and I promise that as soon as it is available, I will give it to the Committee. Everything I have now is anecdotal.

[The information follows:]

Currently, there is no scientific evidence to support a cause and effect relationship between the musculoskeletal injuries being incurred in Theater and load carriage. Clinical presumption and anecdote are driving current discussions. In pursuit of reliable data we have begun to submit protocol proposals to the newly established CENTCOM Institutional Review Board (IRB) for approval to deploy US Army Institute of Environmental Medicine (USARIEM) investigators to both Theaters. There has been some data collected on types of musculoskeletal injuries and conditions in-Theater. Investigators in one study showed that of the 48% of Soldiers who wore Individual Body Armor for 4 hours or more, 70% had neck and back pain. Another study queried Soldiers deployed in 2003 and 2004. The back was the most common site of injury (32% low back, 9% mid back and 6% neck). In addition, 68% of medical evacuations to pain management centers from Iraq were for spine pain. From Jul 04 to Oct 08, low back, mid/upper back, and neck pain were the chief complaints of Soldiers seeking care from physical therapists (Combat Support Hospital: 22%, 7%, and 5%, respectively, and Brigade Combat Teams (BCTs) 23%, 8%, and 6%, respectively). Still, other data from a physical therapist assigned to a BCT reveals the following breakdown of musculoskeletal injuries: 22–25% low back, 6–10% mid back, 4–10% neck, 19–22% shoulder, and 25–44% lower extremity. It is imperative that future research studies focus on the prevalence of injuries that can be attributed to the weight of the load that our service men and women must carry. If there is a direct cause and effect link, then specific factors must be studied (i.e., the amount of weight, gender, and the duration and frequency of load carries).

Mr. ROTHMAN. Thank you, Generals.

I apologize. I am trying to get through as many questions as I can. How big a problem is this for your forces, for you, as commanders, in terms of your strategic objectives or the mission objectives for you? Has it compromised your ability to get your jobs done in the respective theaters, for example, Iraq and Afghanistan.

General AMOS. Sir, it hasn't within the Marine Corps. I will just speak for my community. It has not. And again, go back to how we began here with the recognition by both services that we need the scalable, you know, the opportunity to do the scalable body armor. And if you remember kind of where we began several years ago with a lot of casualties in 2005, heavy casualties, a lot of public interest generated, rightfully so, by parents and by Members of Congress and by Marines. We began looking for ways where we can provide that ultimate protection.

BATTERIES

Mr. ROTHMAN. So you feel we have made tremendous progress, the survivability of injuries on the battlefield and less injuries than before, given the activity every single day and exposure of our forces to harm. We have done extraordinarily well.

One other fast question. Batteries. What does the average soldier or Marine carry in terms of batteries?

I will tell you why we are asking. We are working with different folks in R&D about battery technology to lighten the weight of batteries. Would that make a significant dent in the weight that a Marine or soldier would carry?

General CHIARELLI. Yes, it would. And we are already seeing great advances in battery technology that is pushing that weight down. If you talk about our ground soldier ensemble, that we have been able to drop the weight of it by a pound and a half in newer models because of batteries, improvement in battery technologies. We now have batteries that are scaled for the mission. Short mission, smaller battery, lighter battery. Longer mission, larger battery, more power for a longer period of time so battery technology is something that is definitely working to lighten the load.

Mr. ROTHMAN. And finally, your request in the 2010 budget will incorporate what you believe is the dollar figure necessary to, in the context of all your needs, address this issue to the extent that you feel is appropriate? Or are you going to be underfunded in this 2010 budget in this area?

General AMOS. Sir, it is yet to be seen because we haven't seen what has been approved by the Department of Defense, and you know that. So not only can we not comment, I really don't know what that is. But I will tell you that, from the Marine Corps side of the house, the research and development dollars, which are mostly paid for out of supplementals right now, but we have put 3 percent, we have increased our R&D money in the budget by 3 percent. It doesn't sound like a lot, but it is a significant amount of money in the baseline.

But the R&D piece of this thing is yes, the answer is yes. And as long as we get that, then we will be able to continue because this is science and technology stuff. This is DARPA working on lightening the batteries and all the things that we have been talk-

ing about today. This is stuff that costs money to experiment with. So the answer is yes from the Marine Corps side.

Mr. ROTHMAN. R&D. Very important. Thank you, Generals.

Thank you, Madam Chairman.

Ms. KAPTUR. Thank you, Mr. Rothman.

The Committee has just been great this morning. It has been a very easy job. Very respectful of one another.

INJURIES

Ms. GRANGER. Thank you. I have to follow up on Mr. Rothman because what we are talking about is balance, how do we balance protection of our troops, effectiveness, all of that. And you are looking at equipment and redistribution. But we also have a responsibility to our troops that it is one decision you will make when you are in the field and you are there in the action and you are 27 years old.

The other thing, responsibility, we have talked on this subcommittee so long, is what our responsibility is to those troops for their lifetime for the service they gave. So maybe because I took two pain pills when we are sitting here for my back, that may be the reason that I focus on this. But I know that this weight literally can contribute to a lifetime of difficulties and pain. So we have to keep that in account also, too. It is our responsibility for all of you who serve and to do the best we can for you now and for the rest of your lives. So this is a very important issue. And I think we should be looking at everything.

I happen to know at the University of North Texas Health Science Center, which is in my district, it has been a lot of, given a lot of attention to that. And part of it can be some treatment in the field by medics to give some relief, as well as the training that you are talking about and nutrition. So I think we really need to focus on through this all the time, whatever science we need, research, give you the right equipment at the lowest weight, but keep that responsibility in mind of when you leave the service or you retire that we have left you in the best physical shape we can.

General AMOS. Ma'am, if I could comment on that. There is recognition that if you go back to boot camp in the Marine Corps 15 years ago, we issued recruits flat-bottom sneakers, Converse sneakers. And then we went out, and we couldn't understand why they twisted their ankles and why they had flat feet and why we had all these shin splints. So now we brought in athletic trainers, and we actually have them at all our recruit depots. We have them at our entry level training, like Schools of Infantry (SOI), and we have athletic trainers now out in the fleet at the major headquarters to help us understand how you better condition Marines and what kind of equipment we can get for them that would help prevent the kinds of injuries that we saw 15 years ago.

We actually have, on the onset of injuries at some of our entry level training, that recruit gets whisked off, finds himself or herself in front of a bona fide athletic trainer doing rehabilitation kind of exercises, so there is a recognition of just exactly what you are talking about, that we need to bring that piece of it in here. It is not just equipment lightening; it is the whole thing. It is the balance on your body and then how you condition your body.

General CHIARELLI. If I might add, we, in Afghanistan, are assigning physical therapists down to the brigade and battalion level so that we have that doctor down there that is able to work that injury, should that injury occur and be a musculoskeletal. I think your comments were so correct.

I would also argue that when I was 19 years old, I felt I was a lot more bulletproof than my parents felt that I was. And I would do probably some things that, in my older age, I question why I did that.

I think we always have to remember that when we are shedding protection, that at 19, you probably feel that I can outrun that bullet, whereas someone with a little more experience, a little more time in combat, realizes that that is not something you can always do. So I think it is important to give our leaders the ability to make that important call.

Ms. GRANGER. Thank you very much.

Ms. KAPTUR. Mr. Bishop.

WEIGHT OF WEAPONS

Mr. BISHOP. Thank you very much.

And again, welcome gentlemen. Again, this is a very, very, very pertinent subject area, and this Committee is very concerned about it. One of the things that we have been doing over the last 3 or 4 years with regard to equipment weight, we funded research on new weapon systems to reduce the load. And one of the requirements was that the weapon and ammunition be reduced for the very reasons that we are here today. The XM–8 was a weapon system that has been looked at by the Army, and of course, it has been tested in part at Picatinny. But the key was reducing the weight of the ammunition, using the polymer, as opposed to brass casings, and that preliminary research indicated it would reduce the weight by two-thirds. The average weight would go from 15 pounds to 5 pounds for the ammunition and the weapon, which was seen to be an improvement, but somehow that was moved from the Army to the Joint Committee for study for use across the services, and somehow that has bogged down. But that certainly goes to emphasize what we are talking about here.

The other thing is, I have not heard anybody mention Kevlar for the body armor, which, around the beginning of the deployments to Iraq, parents were going to sporting goods stores or various places and mailing Kevlar vests to their children over there, which spurred this committee to try to accelerate the acquisition and the procurement of the body armor. Kevlar, I was told, and I am not an expert on it, is a lot lighter and would give more flexibility. And if you could comment on that, that would be fine.

But the other thing I want to touch upon, which I think is extremely important today is I am told by staff that the military is not making informed decisions for improving the tactical combat casualty care or the body armor because you are not collecting sufficient data. We are told that 67 percent of the wounded are returned to duty in theater, and many of them are not treated in a hospital, and as a result, we have almost no information on what medical care was provided at the point of the injury. And the Secretary of Defense's Committee on Tactical Combat Casualty Care

says that less than 1 percent of all wounded has complete documentation.

It seems that without a systematic data collection and analysis, far forward medical care can't improve, and we also can't learn about the effectiveness or ineffectiveness of the body armor that protects our troops. Is there a way that you can get data at the level of the first responders, rather than trying to collect it at the surgical center, at the medical center, at some point later, so you know where it was that the body was penetrated, what kind of body armor was worn, was it was properly positioned, and all of those kinds of things, so that the changes that we make at this committee that we fund that you ask us for are not based on anecdotal information but on systematically collected and studied data?

General CHIARELLI. Well, as far as the current plates that we use, our SAPI plates, I am confident that they are the finest piece of equipment available today. We have made movement forward in Kevlar, and both General Amos and, Marines and the Army are looking at a new helmet, Kevlar helmet that will provide additional protection.

When it comes to providing care forward on the battlefield, after spending 2 years in Iraq, I can tell you that I feel that one of the things that has led to the high survivability rate of our soldiers is our combat lifesaver program where your buddy is trained in emergency medicine and can immediately render aid. I don't know of anyone who has a penetrating wound that would not be transferred where the kind of data that you are talking about, sir, could be collected. I mean, any kind of a penetrating wound, you are going to get immediate aid by a combat lifesaver, and then you are going to be moved to that location. But I am sure there are things that we could do to better collect that data when it comes to our ability to electronically provide it. But I will have to take a look and see exactly what we are doing.

STRESS INJURIES

Mr. BISHOP. The stress fractures, the orthopedic type injuries that result from the load carrying, or the load shifting, which generally are not documented, according to the Secretary of Defense's Tactical Committee, don't get any documentation, less than 1 percent, which means that we really don't have data. We know that there are some injuries from these loads, but we don't have real documentation of it.

General CHIARELLI. That is why I am excited about what the University of Pittsburgh is doing for. They are in, I believe, the second year of a long term study to collect just that kind of data. Both before the rotation, and once the soldier returns, and providing the soldier the tools he needs to work on his physical strength while he is deployed.

DEPLOYMENT TIMES

Mr. BISHOP. If the Chairwoman will allow me to ask one more question, I will be grateful. It has to do with the deployment times. For the Army, it is 12 to 15 months, and the Marines it is 7 months. Someone carrying 100 pounds in 110-degree weather would wear down the body much more with the extended deploy-

ments than with, for example, with the Marines, the shorter deployments. And of course, the better dwell time would give the body a much better time to recuperate. Is that also a contributing factor to the injuries that we are talking about with the load carrying, the fact that they have extended deployments?

General CHIARELLI. There is no doubt in my mind. I think you have stated that absolutely correct. It is both a function of dwell time and the opportunity to recover from the injuries. But it is also a function, I think, why we are seeing more effect of this than the Marines are because of 12- to 15-month deployments.

Mr. BISHOP. And nutrition.

General CHIARELLI. And nutrition.

[The information follows:]

Documentation of medical care by first responders at the Point-of-Injury (POI) is problematic. Not all first responders are medics who are trained to document medical care. Every squad, platoon, and company has Soldiers who are trained as combat lifesavers who may be the first responder rendering emergency life-saving first aid. In a September 2007 report, the Committee on Tactical Combat Casualty Care (CoTCCC), Sub-committee on First Responders, examined this issue. Of over 30,000 Wounded-in-Action reviewed in the report, less than 10% of records had pre-hospital documentation and in only 1% of cases was the information available found to be adequate. This lack of information flow from POI does not meet the CoTCCC standard which states that critical data elements of health care information must be reliably communicated along the evacuation chain to ensure optimal care. Also, reliable first responder information is critical to inform improvements to tourniquets, hemostatic dressings, needle length for decompression of tension pneumothorax and airway management, as several examples.

The Office of the Army Surgeon General, in conjunction with the Army Medical Department Center and School, is piloting a prototype First Responder Card for use in the Improved First Aid Kits. A minimum set of documentation must be recorded and transferred up the evacuation chain as a standard of care. Working with the US Army Medical Materiel Agency, our goal is to build an easy to use, easy to train, rugged, low cost paper-based tool for first responders, combat lifesavers, and combat medics. We will train Soldiers to ensure that this does not detract from the focus of applying the immediate emergent medical care that can save a Soldier's life. Upon arrival to higher levels of care, this information must be subsequently captured in AHLTA–T, the theater electronic medical record. Handheld devices such as the Battlefield Medical Information System Tactical—Joint are useful for acute care (e.g. sick call) documentation, but impractical for documenting care at the POI. It is not reliable as a consistent, DoD-wide method to capture combat casualty care.

There is some aid station combat casualty care data available, but it is sparse. The Combat Theater Registry (Navy, San Diego) does capture aid station (Level 1) data which is integrated with the Joint Theater Trauma Registry, which also captures a minimal amount of Level 1 data. An improvement in capturing Level 1 data is critical to fully inform improvements to first responder devices and lifesaving interventions.

The data that we currently receive from Level 1, but predominantly from higher levels, have been put to use in developing improved materiel solutions and tactics. The DoD Medical Research Program for the Prevention, Mitigation and Treatment of Blast Injuries was established in July 2006 and since its inception, has made significant improvements in the way we protect our warfighters from blast-related injuries, in the way we treat injured warfighters, and in the way we rehabilitate injured warfighters for return to duty or to healthy civilian life. Among many noteworthy contributions was the establishment of the Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC) Program.

The JTAPIC Program links the DoD medical, intelligence, operational and materiel development communities with a common goal: to collect, integrate, and analyze injury and operational data in order to improve the understanding of our vulnerabilities to threats and enable the development of improved tactics, techniques, and procedures and materiel solutions that will prevent/mitigate traumatic injuries.

The JTAPIC program is a multi-lateral and multi-community partnership sharing and analyzing data in order to provide actionable information to improve Warfighter survivability. Partners include the Army National Ground Intelligence Center; Of-

fice of the Armed Forces Medical Examiner; PM-Soldier; Army Research Lab; Army Aeromedical Research Lab; Army Institute of Surgical Research; Army Infantry Center, Naval Health Research Center; and Marine Corps Systems Command.

JTAPIC has made a significant difference in the way we protect our Warfighters from combat injuries by:

• Providing actionable information to combat vehicle program managers leading to modifications and/or upgrades to vehicle equipment and protection systems, (seat design, blast mitigating armor, and fire suppression systems).

• Establishing a near-real time process for collecting and analyzing combat incident data that confirmed the presence of threat weapons of interest

• Analyzing combat incident data to identify vulnerabilities in operational procedures, and rapidly conveyed those vulnerabilities to commanders in theater

• Assisting PEO-Soldier in establishing a process for collecting and analyzing damaged personal protective equipment (PPE), such as body armor and combat helmets, to provide PPE developers with the information they need to develop enhanced protection systems.

The JTAPIC Program received the 2008 Department of the Army Research and Development Laboratory of the Year Award for Collaboration Team of the Year in recognition of these accomplishments.

Ms. KAPTUR. Thank you.

Ms. Kilpatrick.

PREPARATION FOR COMBAT

Ms. KILPATRICK. Thank you, Madam Chair.

Generals, it is good to be with you this morning. The best part of our military are the men and women, soldiers, sailors, Marines and Air Force, who commit their lives every day to defending our country. I served on the Air Force Academy board for about 4 years, and visiting Colorado and watching them and hearing them, and now having gone to see some Marines and Navy and also Army, it is the troops who really defend us. And they are so young. And as a grandmother, I am just always moved by their dedication.

The two sergeants, both having been deployed to Iraq, and one, if not both, on their way to Afghanistan, lessening the load is paramount. And I know there is only two or three ways to do it. Either you reduce the area that is covered, or you develop technological kinds of things you are both working on. And the testimony you provided this morning has been very helpful. Or you transport by some other means, unmanned vehicle or others, some of the equipment so that they have it when they need it. I like the fact that you said air dropping. And sometimes when you air drop some of it disintegrates or goes somewhere, so you don't have to worry about it. And they still have what they need to defend themselves, as well as their brigades and the like.

I am real concerned. I love what you said, too: We value life more than many of our enemies. And because of that, and I heard a little squabble over here when one of my colleagues asked, does our—I am saying enemy; you all might call them somebody else—take care of their soldiers and Marines like we do in terms of their body armor. And the answer was no. They sometimes just have a weapon or two, so they are lighter, and they can move around. You also mentioned they are skillful enough where they know our body armor, so they try to shoot where they know it is not. I don't know how you defend against that. And the technology you discussed about it.

Their fitness. One thing I have found on my travels is the men are small, men and women. And having just come from Chairman

Norm Dicks' district and having been on an aircraft carrier as well as a couple of submarines, going up and down the steps and all of that, it is very important, in combat as well as they do their fitness training. And you have talked about that this morning, that they be prepared for what is before them.

Iraq is one war, and I thank God I have always been an opponent and looking forward to the drawing down of some of our troops there. But some of those same troops are now on their way to Afghanistan. Different terrain. Different war. I come from Michigan, where 25 different sets of Arabs have been living with us all our lives. Friendly, all of that, in Michigan. So when we go to another country with a different kind of social values, religious beliefs and all of that, we are really, in addition to fighting the physical war, we are also fighting culture, religion and all of that. So we come to a situation where the soldiers and Marines and sailors and all are in a difficult situation.

I am very concerned about Afghanistan, very concerned. All my Arab friends say it is a different kind of people there, even than Iraq. The two sergeants, both sergeants, yes, have dedicated their lives, have come back healthy. They are now about to be deployed somewhere else. Is lessening the load as paramount as the Stryker Brigades or the other brigades that they have to fight with, the comprehensive coordination of the various military services?

You know, in this Committee, and chairman—all our chairmen really in our Committee, the men and women come first. And whatever they need, I don't care what OMB says, you have to let us know that. And I am not real sure that enough of that is being done, number one. Are we ready for Afghanistan as we uptroop there and diminish the numbers in Iraq?

Generals, are our men and women prepared? Would you say that yes, we have done all we can as this committee and their supervisors and commanders, that they are ready to fight this war? I know that was a lot.

General AMOS. Ma'am, give me the opportunity to answer first here. A resounding yes. I appeared before this subcommittee last year several times as the head of requirements for the Marine Corps. And as Pete and I began our verbal statement this morning, we began with a thank you. And the honest to goodness truth is, thank you, because I can't think of one thing, and I am not making this up, I can't think of one thing that the Marine Corps said, hey, we really need, that this Committee said, I am sorry, we can't afford it. That has not happened one time. So the answer to that is, you have given us everything we need. We anticipate that that will continue as we go into the fiscal year 2010 and we get the FYDP bill for POM 10. So I am optimistic about that.

The training piece is pretty amazing because you take, I will give you an example of a young battalion, Second Battalion, Seventh Marines. Excuse me, Third Battalion, Seventh Marines, right in the middle of Ramadier, in heavy kinetics. And things changed instantly. Almost within about 2 weeks, that battalion, who had gone out and losing Marines, they had lost a bunch of Marines. All of a sudden the Sunni awakening finally came from east, excuse me, west to east and hit Ramadi. And when that happened the, Sheikhs in Ramadi began to change. And so here are 19- and 18-

year-old men that lost their best friend 2 weeks ago, that are now being asked to change their mind set. It is like reprogramming a new Windows application in their brain going, hey, listen, we have to treat these people differently. We have to approach them completely differently. And they did it. They were able to change. So that is, first of all, that is a testimony to the kind of young men and women we have.

And the second piece of it is that, which gets to your question, is the training that they get before they go, in both our services, I promise you that it is focused, it is absolutely drilled into culture, language. It is not just kinetics. It is not just, how bad can we be? In many cases, it is, how good can we be? So the training is very specific. We are putting in 8,000 Marines right now into Afghanistan over the next 90 days. Every one of those Marines have gone through about 3 or 4 months of extensive training to prepare them for the culture, the physical fitness part of this thing, the language and their mission. So that is the Marine Corps.

First of all, you have done a remarkable job taking care of us. Second of all, your Marines, your young men and women are prepared.

Ms. KILPATRICK. Thank you, General.

General CHIARELLI. I can't add anything to that. All I can say is thank you, thank you for everything the Committee has done. You have given us everything we need and I know of no time that there has been something that you have told us no, I am sorry we can't do. And for that, we are grateful. And I know I speak for the 1.1 million soldiers and their families in thanking you for all that you have done and will continue to do.

Ms. KILPATRICK. It is important, the data. I was going to say something about the data. And I see Congressman Bishop did that. Very important. It has got to be scientific as we go forward, whatever we need to lighten the load and to win the war and to bring all of our soldiers and sailors and all of that home. Thank you for your service.

Ms. KAPTUR. Thank you very much.

Mr. Dicks.

NONDEPLOYABLES

Mr. DICKS. General Chiarelli and General Amos, sorry I wasn't here, but we had to have a hearing with the Forest Service this morning before my other committee. But I want to thank you both for your good work and your efforts to help our troops.

Let me ask you something. You know, we now say we have 20,000 who are nondeployable. What happens to those nondeployables? What do they do?

General CHIARELLI. 10,000, or just under 10,000, Congressman, are currently in our Warrior Transition Units, and they are on a regimen of care that will either see them leaving the service or possibly returning back to their units. That number has dropped from a high of 13,000 in July down to now less than 10,000, somewhere in the vicinity of 9,700 or 9,800. The other 10,000 that I speak of are normally left in units. They have injuries that are not as severe, that do not require that they be seen in a WTU, and they re-

main with the rear and heal, making their medical appointments and hopefully, before too long, returning to their unit.

Mr. DICKS. It would seem, you know, that some of these people would be, as you have suggested, be able to do other, have other roles in logistics or support or whatever. And I take it that is what you are doing.

General CHIARELLI. That is exactly what we are doing. That is why they are not all in a WTU. If you are in a Warrior Transition Unit, your number one goal is to get better and make a determination whether or not you are going to remain with the service because that is what you and your family want to do or whether you have made a decision to leave the service. Those that are left with their units, the rear detachments in their units, they are doing other tasks in that rear detachment and getting better.

Mr. DICKS. Every time I go out there at Madigan to see the Warrior Transition Unit at Fort Lewis, all these troops want to do is get back to their unit. So I don't detect that this is, you know, that anybody is taking, maybe there are a few, but the vast majority want to get well and return to service. I mean, I take it that is how you view this as well.

General CHIARELLI. That is exactly right. I can't state that any better.

EXTENSION BONUSES

Mr. DICKS. General Amos, what about the Marines? What are you doing with your nondeployables?

General AMOS. We don't have, because our deployment schedule is a little bit—nondeployables make up Marines that are fixing to, at the end of their service, some are wounded and they are attached to our Wounded Warrior Battalions. Our numbers are significantly smaller. Those that are in our Wounded Warrior Battalions are just exactly like General Chiarelli talked about. Their primary focus on life is to get well, and we work with them and care for them. That number is reasonably small. But because of the 7-month deployments, what this allows us to do to those Marines that would normally be towards their end of service and maybe not deployable for a lengthy deployment, the 7 months allow us actually some more flexibility and allows us to harvest out and get those Marines and put them in.

We have also offered bonuses for Marines that will stay and extend. In other words, if you have only got 5 months left on your contract, and instead of becoming a non deployable, if you want to stay with your unit, which is exactly what most soldiers and most Marines want to do, they want to deploy. They may not want to re-enlist, but for a small amount of money, we can afford them the opportunity to stay and complete that deployment. So we are trying to be creative to keep a lot of those. There is a portion of them, now, that we actually put in the training pipeline. In other words, they are back at Lejeune and Pendleton and out at 29 Palms, and because of their combat experience they have become role players, they become mentors, they become trainers for the Marines for the units that are actually going through. So there is nobody sitting around lamenting the fact that—we are actually using them.

LAND WARRIOR

Mr. DICKS. Okay. I have another quick question for General Chiarelli. Tell us about the land warrior equipment. When I was out at Fort Lewis, they told me that this was, that they had I guess it was one of the Stryker Brigades had used it, and everybody thought it was a huge success. Tell us about this. What is this, I guess as I understand it is technology that enhances communications and situational awareness.

General CHIARELLI. It is an amazing piece of kit. And I think it is going to be revolutionary. And I think that the Stryker Brigade, the first one that used it came back and indicated that they were much more effective in this kind of fight that we are in. I will tell you that, for this Committee, that that first piece of kit that we issued and what it does do is it provides situational awareness and allows you to provide down to that soldier level through an eyepiece that he looks into, where all his buddies are and anybody else who is approaching his position that is using this kind of gear. So it gives him unbelievable situational awareness and ability to pass down information. It comes at a total weight of 10 pounds. We have improved that through battery technology down to 8.5 pounds. And we are coming out with a new system called ground soldier ensemble which will get even lighter. But this is one of those instances where we have added to the soldiers weight but the soldier is more than happy to carry it because of the extra capability it gives them in the fight.

And I agree with you, it was the soldiers at Fort Lewis who used the very first models of this who came back and said, this is something we just have to have.

Mr. DICKS. And what about, how will this play out in Afghanistan? Is this something that we are going to need in Afghanistan?

General CHIARELLI. We will have it in Afghanistan with one of the units we are sending over now, Congressman, from Fort Lewis.

Mr. DICKS. Yeah. Five Two.

General CHIARELLI. Five Two will go over with it and we are very, very excited about collecting the data to see how effective it is in that kind of environment.

General CHIARELLI. Thank you.

Ms. KAPTUR. Thank you very much. I have to say in listening this morning, certainly thinking about Afghanistan, the relationship between weight and endurance in a mountainous terrain concerns this Member. And I know we have talked a lot about alternatives to carrying all that weight and not knowing all of the encounters that our soldiers will have. Some of the information in the record here about, or in the testimony relating to upper body endurance decreasing 60 percent for periods during which that soldier has to walk 10 to 15 miles is a pretty stark figure. And I know the generals are more aware than anyone what this actually means.

Congresswoman Granger talked about back injuries, and for the individual body armor, it states here in the testimony, actually of General Chiarelli, that 48 percent of the soldiers who wore that for 4 hours or more, 70 percent had neck and back pain, and that from the years 2004 to 2008, low back, mid upper back neck pain were the chief complaints of soldiers seeking care, and that injury is

likely to be greater in Afghanistan, given the higher elevations and steep rugged terrain. So I am asking myself here, you know, you generals have really incredible responsibility here to try to provide our soldiers with the greatest ability for success in their mission with this incredible weight.

I mean, it is unbelievable what they are doing. But this is just a huge burden and we worry about, I worry about maneuverability. I worry about endurance. I mean, each of us have been at places in our lives where you knew you were at the edge of your endurance, and that is not a very good feeling. And so I just wish you well in your efforts. And this committee stands ready to support you in any way that we can.

I was going to ask Mr. Young if he had any concluding comments at this point.

Mr. YOUNG. Madam Chairman, I want to thank General Chiarelli and General Amos for being here today and for working so hard on this issue. But I especially want to thank the two sergeants who came in carrying their heavy load to demonstrate for the members of the Committee just exactly what it is we are talking about. We can talk about it a lot. But we understand it a lot better when we really see it. So thank you very much for inviting the two sergeants in.

And Madam Chairman, it has been a good hearing and thank you very much.

Ms. KAPTUR. Thank you. Thank you very much, Mr. Young.

And we would like to thank, again, General Chiarelli and General Amos formally this morning for your appearance. For the sergeants who so ably represented your services, thank you. Thank you for your commitment to our country. For all those who have attended, and I want to thank the subcommittee this morning. You have been fantastic. Thank you very much.

The Committee will adjourn until 1:30 this afternoon, Wednesday, March 11. At that time the Committee will hold a hearing in closed session on the readiness of the Army and the Marine Corps.

[CLERK'S NOTE.—Questions submitted by Mr. Murtha and the answers thereto follow:]

COMBAT LOADS CONTRIBUTING TO INJURIES

Question. In a February 1st, 2009 article in the Washington Post, the Marine Corps Commandant General James Conway is quoted as saying "We are going to have to lighten our load." In the same article, General Chiarelli, referring to the fact that injuries are forcing more soldiers to stay at home, making it very hard for the Army to fill units for upcoming deployments to Afghanistan and Iraq, you are quoted saying "There is no doubt that [in] our non-deployable rates, we're seeing an increase. I don't want to see it grow anymore." General Chiarelli, you indicated that the number of total non-deployables, for the Army, has risen by an estimated 2,000 to 3,000 since 2006, putting the current number of non-deployables at about 20,000.

Just how much total weight are our Soldiers and Marines asked to carry on foot patrol including body armor, food, water, weapon, ammunition, and communications gear?

Army Answer. Today, the average Soldier load consists of a rucksack, weapon, ammunition, helmet, and other gear; the total weight can range from 63 to 130+ pounds depending on the variables of mission type, duration, and environment. On patrols in Afghanistan, the Soldier's load is approximately 125 pounds. In addition, the individual components of Individual Body Armor (IBA) worn by Soldiers ranges from 2.5 pounds (side plate carriers) to 9.6 pounds (outer tactical vest) to 10.5 pounds (front and back Enhanced-Small Arms Protective Inserts (ESAPI) ballistic

plate inserts); the total weight for a full set of IBA range in weight from 26 pounds to over 41 pounds. These extra pieces not only add more weight, but the cumbersome gear often hinders Soldier movement.

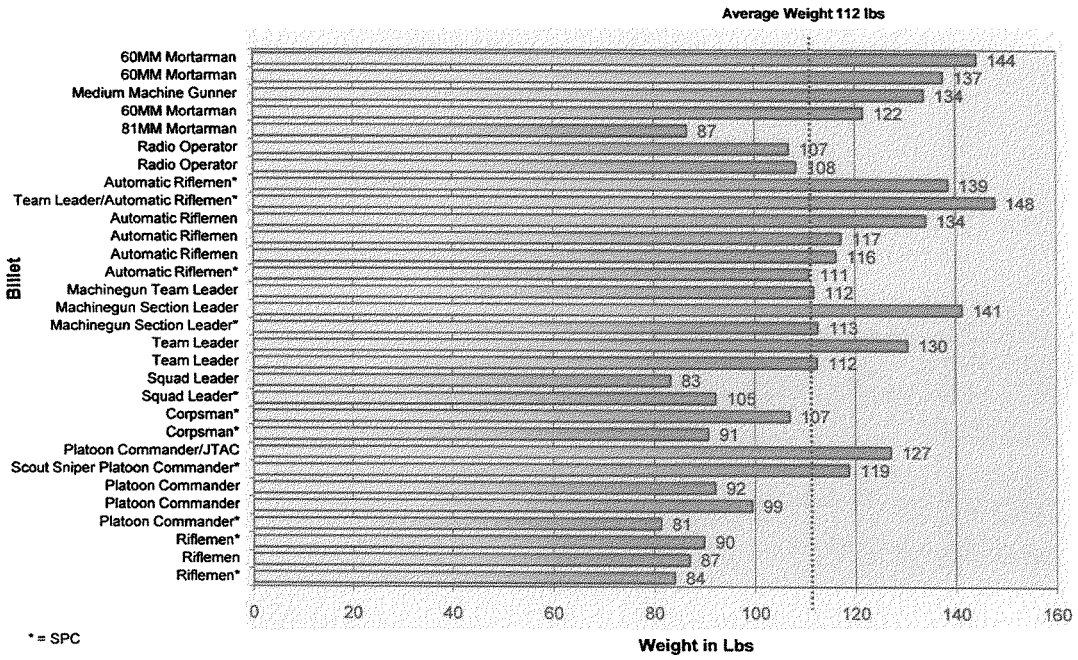
Marine Corps Answer. Marines carry equipment based on their billet, mission, environment, and enemy threat. The Marines and sailors load is composed mainly of equipment that is basic to all billets and then unique equipment associated with the specific billets and missions. The basic equipment is usually in the 75–90 pound range depending upon the individual Marine's size. However, additional equipment and ammunition is usually required based on the task organization requirements and duration of the missions.

A survey was conducted with 2nd Battalion 7th Marines deployed to Afghanistan from April 2008 to November 2008. This post deployment survey was conducted in January 2009. The battalion did not have any trends of weight related injuries.

Enclosure/Table 1 graphically illustrates the weight carried by each Marine by billet and the variance in weight by billet.

TABLE 1

Total Weight by Billet



* = SPC

TABLE 2

2nd Battalion 7th Marines Survey Results, and Self Reported Weight and Equipment																															Average
Category	Rifleman*	Rifleman	Rifleman*	Platoon Commander*	Platoon Commander	Platoon Commander	Scout Sniper Platoon Commander*	Platoon Commander/JTAC	Corpsman*	Corpsman*	Squad Leader*	Squad Leader	Team Leader	Team Leader	Machinegun Section Leader*	Machinegun Section Leader	Machinegun Team Leader	Automatic Rifleman*	Automatic Rifleman	Automatic Rifleman	Automatic Rifleman	Team Leader/Automatic Rifleman*	Automatic Rifleman*	Radio Operator	Radio Operator	81MM Mortarman	60MM Mortarman	Medium Machine Gunner	60MM Mortarman	60MM Mortarman	
Total Weight (lbs)*	84	87	90	81	99	92	119	127	91	107	92	83	112	130	113	141	112	111	116	117	134	148	139	108	107	87	122	134	137	144	112
	Percentage of Total Weight by Billet																														
PERSONAL PROTECTIVE EQUIPMENT	45%	52%	45%	47%	48%	49%	10%	36%	39%	31%	47%	58%	40%	36%	34%	37%	41%	10%	39%	36%	34%	26%	28%	42%	43%	52%	37%	34%	33%	31%	39%
WEAPONS	11%	13%	12%	13%	12%	15%	23%	8%	11%	17%	10%	12%	19%	16%	9%	27%	17%	15%	14%	17%	15%	14%	11%	9%	9%	13%	19%	28%	21%	20%	15%
AMMO	17%	14%	8%	13%	19%	15%	10%	19%	7%	13%	16%	11%	22%	16%	42%	22%	24%	29%	25%	25%	24%	40%	32%	10%	8%	14%	27%	20%	17%	32%	20%
OPTICS AND SENSORS	2%	2%	2%	5%	3%	2%	8%	1%	2%	1%	10%	2%	3%	2%	3%	8%	1%	8%	1%	4%	2%	8%	2%	3%	1%	2%	4%	1%	5%	1%	3%
COMMUNICATIONS	2%	2%	1%	4%	4%	4%	3%	15%	1%	1%	2%	4%	1%	1%	1%	1%	1%	1%	1%	3%	2%	1%	1%	13%	19%	2%	1%	1%	12%	1%	4%
SUSTAINMENT & MISC	22%	17%	34%	18%	17%	15%	24%	20%	36%	31%	20%	16%	16%	30%	12%	10%	16%	12%	18%	12%	23%	12%	27%	23%	20%	17%	11%	16%	12%	15%	19%

*Weight of pouches and not included in figures due to variations in COT products. Weight of MTV and SPC based on size LARGE.

RED = HEAVIEST CATEGORY

BLUE = SPC

Infantry equipment can be consolidated into six basic categories: personal protective equipment, weapons, ammunition, optics and sensors, and sustainment miscellaneous equipment (i.e., water). Enclosure/Table 2 illustrates the weight per individual broken out into the six categories.

The load a Marine or sailor carries varies, but this data set represents the range of loads that are actually carried by Marines and sailors in Afghanistan.

Question. General Amos and General Chiarelli, what is the prevalence of injuries that can be attributed to the weight of the load that our Marines and Soldiers must carry?

Army Answer. Currently, there is no scientific evidence to support a causal relationship between Soldier load and the musculoskeletal injuries being incurred in theater. Clinical presumption and anecdotes are driving current discussions. In pursuit of reliable data we have begun to submit protocol proposals to the newly (2009) established CENTCOM Institutional Review Board (IRB) for approval to deploy US Army Institute of Environmental Medicine (USARIEM) investigators to both theaters. To date, there has been some data collected on types of musculoskeletal injuries and conditions in-theater. Investigators in one study showed that of the 48% of Soldiers who wore the Individual Body Armor (IBA) for 4 hours or more, 70% had neck and back pain. Another study queried Soldiers deployed in 2003 and 2004. Responses indicated that the back was the most common site of injury (32% low back, 9% mid back and 6% neck). In addition, 68% of medical evacuations to pain management centers from Iraq were for spine pain. From Jul 04 to Oct 08, low back, mid/upper back, and neck pain were the chief complaints of Soldiers seeking care from physical therapists (Combat Support Hospital: 22%, 7%, and 5%, respectively, and Brigade Combat Teams (BCTs) 23%, 8%, and 6%, respectively). Still, other data collected by a physical therapist assigned to a BCT reveals the following breakdown of musculoskeletal injuries: 22–25% low back, 6–10% mid back, 4–10% neck, 19–22% shoulder, and 25–44% lower extremity. It is imperative that future research studies continue to focus on the prevalence of injuries that can be attributed to the weight of the load that our service men and women must carry. Meanwhile, we must continue to pursue ways to reduce the heaviness of the combat loads being carried by Soldiers in Iraq and Afghanistan.

Marine Corps Answer. Our data indicates that a large percentage of non-battle injuries are due to musculoskeletal injuries (approximately 40%). Weight load may play a role in some of these injuries but its exact contribution is not certain as the Marine Corps has not been systematically collecting the necessary data elements to perform an appropriate analysis. Going forward, the Marine Corps is currently evaluating what data elements are essential to better address this topic.

Question. Are the type of injuries that are caused by heavy loads generally the sort that heal fairly quickly or are we facing large numbers of long-term rehabilitation and permanent disability?

Army Answer. Soldiers have only been wearing this load in a prolonged repetitive manner during combat conditions or approximately 5 years (short-term). Therefore it is difficult to draw any scientifically valid conclusions about long-term effects and rehabilitation. However, the Army is in the process of conducting studies to examine the short- and long-term impact of load carriage on the musculoskeletal system as well as studying preventive interventions that may be helpful. For instance, the Military Performance Division of the US Army Research Institute for Environmental Medicine (USARIEM) has several ongoing dies addressing these issues to include studying the "Effectiveness of Core Stabilization on a Soldier's Ability to Carry a Load", "Effects of the New Plate Carrier System on Body Mechanics and Physiological Responses to Carrying a Load." In an effort to address injury prevalence and activities associated with injuries, USARIEM and the Center for Health Promotion and Preventive Medicine (CHPPM) is surveying a group of Soldiers deploying to Theater. This study proposes to survey injured Soldiers in a support battalion as well as an infantry battalion to determine the cause of injury and identify potential risk factors with a goal of creating a predictive model that allows one to identify or predict the types of injuries Soldiers may encounter by military occupational specialty and activity. Finally, the University of Pittsburgh in collaboration with the 101st Airborne Division (Air Assault) is attempting to link the demands of training and military operations to injury and performance outcome testing by analyzing the biomechanics, musculoskeletal, physiological and nutritional profiles of Soldiers at the 101st. The bottom line is that the Army is addressing this issue in a multifaceted manner by conducting research, improving physical conditioning to optimize performance, incorporating injury's prevention methods, and pursuing lighter protective equipment.

Marine Corps Answer. Most injuries are temporary in nature and heal fairly quickly. By definition, sprains, strains and stress fractures fall into this category.

There will certainly be service members who will experience more serious injuries, however we have not seen a significant change in the referral pattern to the Physical Evaluation Board that would imply that large numbers of these types of injuries are occurring.

Question. Is there a basic load weight beyond which the frequency of injuries grows dramatically?

Army Answer. There are currently no known scientific studies that can confirm the causal relationship between load weight and the frequency and severity of injuries. However, multiple studies illustrate how carrying a heavy load can cause pain, reduce performance, and increase fatigue. In one study, Special Forces Soldiers carried loads of 75, 106, and 134 pounds for 12.5 miles (as fast as possible) with three days of rest between trials. Results indicated that Soldiers complained of 37% more back discomfort with the 134 pound pack than with the 106 pound pack. Additionally, their marksmanship performance declined 66% for the first minute after the march, but at two minutes post-exercise their performance was similar to pre-march performance. In another study, infantry Soldiers carrying a load of 101 pounds for 12.5 miles had a decrease of 26% in marksmanship (number of targets hit), a 33% increase in distance from the target center and an increase in back pain compared to pre-load and march scores. Other studies showed that after wearing Individual Body Armor (IBA) and walking for 30 minutes on a treadmill, upper extremity muscle endurance decreased 60% and lower extremity muscle endurance decreased 15%. As muscle endurance decreases, the risk of injury increases. This factor is further compounded when Soldiers are then asked to conduct operations in uneven or mountainous terrain or conduct lengthy urban operations.

Marine Corps Answer. Individual tolerances to load weight occur along a continuum. We have no data that points to a specific load at which injuries become significantly more likely.

Question. How many Marines and how many Soldiers are currently in a non-deployable status due to injuries that can be linked to the weight of the individuals' basic load?

Army Answer. Although we are seeing an increase in musculoskeletal injuries related to deployments, there are currently no scientific studies available that can confirm this causal relationship between Soldier load and musculoskeletal injury.

Marine Corps Answer. The Marine Corps does not currently have a method in place to track the number of Marines that are in a non-deployable status due to sustained injuries related to their combat load.

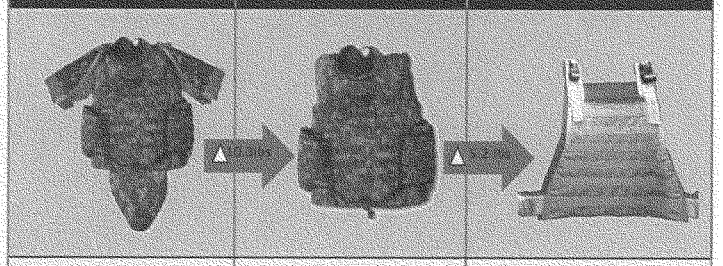
BODY ARMOR

Question. When anyone attempts to address the problem of reducing the weight of the load the individual soldier or Marine must carry, the first thing that comes to mind is usually body armor. For many soldiers and Marines, body armor is also the heaviest single item in the load. Body armor has saved many lives. But it is very heavy and any weight that can be taken out of body armor without sacrificing protection is worth pursuing.

What are the various types of body armor, including for the Special Forces?

Army Answer. The Army issues Interceptor Body Armor (IBA) to all of its Soldiers. IBA has a modular capability and can be reconfigured by the commander to meet their mission and threat requirements. As of 11 May 09, the Army will issue a plate carrier to one battalion in 4th ID, which is the same plate carrier that SOCOM issues to US Army Soldiers in its units.

Body Armor Comparison

Interceptor Body Armor (IBA) Complete - IOTV, ESAPI, ESBI, DP, and Groin Protector	IBA in minimum configuration – IOTV and ESAPI	SOCOM Modular Body Armor Vest (MBAV) with ESAPI
		
Size: M	Size: M	Size: M
Weight: 31.1 lbs	Weight: 20.8 lbs	Weight: 15.6 lbs
Area of Coverage: 1,085 sq.in	Area of Coverage: 885 sq.in	Area of Coverage: 231 sq.in

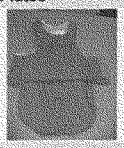
1

Additionally, SOCOM has other body armor vests as illustrated below.

UNCLASSIFIED/FOUO

SPEAR Body Armor

SPEAR Tactical Land Systems

A Body Armor System consists of the carrier, soft armor and ballistic plate	Modular Body Armor Vest (MBAV) W / SPEAR Plates	Releasable Body Armor Vest (RBAV) W / SPEAR Plates	Low Visibility Body Armor Vest (LVBAV) W / SPEAR Plates	RBAV with Modular Supplemental Armor Protection*
Illustration				
Size	Medium	Medium	Medium	Medium
Weight	15.3 lbs	18.0 lbs	16.0 lbs	28.5
Area of Coverage	231 sq in	496 sq in	496 sq in	496 sq in
When Fielded	FY 05	FY 05	FY 05	FY 07

* Includes ballistic plates

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Marine Corps Answer. The four types of body armor currently in use by the Marine Corps are the Modular Tactical Vest (MTV), Outer Tactical Vest (OTV), Scalable Plate Carrier (SPC), and Full Spectrum Battle Equipment (FSBE). The MTV offers the greatest area of soft armor coverage, and is used by Marine units deployed to the MARCENT Area of Operations (AO) in support of both Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). The MTV was fielded in response to an Urgent Universal Needs Statement (UUNS) issued by in-theater units. The OTV remains the Program of Record body armor system for the Marine Corps and is issued to Marines and units that are not deploying to the MARCENT AO. The OTV is issued to Marines in between deployments to the MARCENT AO for use in training. The SPC is the lightest set of body armor utilized by the Marine Corps. The reduction in weight is made possible by a decrease of the soft armor area of coverage. The SPC was also initiated through the submission of an UUNS. It is intended for use by infantry units deployed in support of Operation Enduring Freedom (OEF), as well as Combat Vehicle Crewmen deployed to any theater in support of combat operations. FSBE is a specialized body armor variant used by U.S. Marine Corps Forces Special Operations Command (MARSOC), Reconnaissance units, Air and Naval Gunfire Liaison Company (ANGLICO), Explosive Ordnance Disposal (EOD), Marine Security Forces Battalion, Fleet Antiterrorism Security Teams (FAST), and the helicopter assault company from within the Battalion Landing Team (BLT) assigned to a Marine Expeditionary Unit (MEU).

Question. What comprises a set of body armor?

Army Answer. A set of Interceptor Body Armor (IBA) consists of the Outer Tactical Vest (OTV) or the Improved Outer Tactical Vest (IOTV), a set of Enhanced Small Arms Protective Inserts (ESAPI), the Deltoid Auxiliary Protection (DAP) and the Enhanced Side Ballistic Inserts (ESBI). The Army is in the process of transitioning from OTV to IOTV. The IBA provides protection against fragmentation and small arms ammunition.

Marine Corps Answer. Body armor consists of the carrier, "soft armor" Kevlar inserts, and "hard" ceramic plate inserts. The carrier is the frame, and holds the soft and hard armor inserts. "Soft" Kevlar inserts provide ballistic protection against fragmentation and 9mm caliber ammunition, and when inserted into the carrier, protect a large portion of a Marine's torso. "Hard" ceramic plates, called Enhanced Small Arms Protective Inserts (ESAPI) provide protection against higher caliber ammunition. They cover the most vital areas of a Marine's torso: front, back, and sides.

Question. What do the various parts weigh, such as side armor and deltoid armor?

Army Answer. The weights of Interceptor Body Armor components for size large are as follows: The Outer Tactical Vest weighs 10.6 lbs + Deltoid Auxiliary Protector at 5.5 lbs + the Side Plate Carriers at 2.5 lbs gives the set a total weight OTV of 18.6 lbs.

The Improved Outer Tactical Vest weighs 13.2 lbs + Deltoid Protector at 2.5 lbs brings the total weight IOTV of 15.7 lbs. The Enhanced Small Arms Protective Inserts weigh 12.5 lbs and Enhanced Side Ballistic Inserts (ESBI) weigh 5.0 lbs.

Marine Corps Answer. The Modular Tactical Vest (MTV) is composed of the carrier with soft armor inserts (15.5 lbs), front and back ESAPI plates (12.5 lbs combined weight for size large), and two Side-ESAPI plates (combined 4.6 lbs). The system, in size large, weighs a total of 32.6 lbs.

The Outer Tactical Vest (OTV) is composed of the carrier with soft armor inserts (12.3 lbs), front and back ESAPI plates (12.5 lbs combined weight for size large), and side ESAPI plates (4.6 lbs). Total system weight in size large is 29.4 lbs.

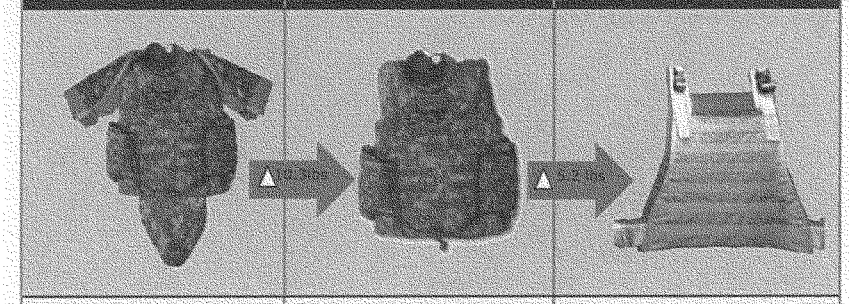
The Scalable Plate Carrier (SPC) is composed of the carrier with soft armor inserts (8.8 lbs), front and back ESAPI plates (12.5 lbs combined weight for size large), and side ESAPI plates (4.6 lbs). Total system weight in size large is 24.9 lbs.

The Marine Corps does not use deltoid armor.

Question. What is the total weight of each type of body armor currently in use?

Army Answer. The charts below shows the weight comparisons of body armor currently in use by US Army Soldiers:

Body Armor Comparison

Interceptor Body Armor (IBA) Complete - IOTV, ESAPI, ESBI, DP, and Groin Protector	IBA in minimum configuration – IOTV and ESAPI	SOCOM Modular Body Armor Vest (MBAV) with ESAPI
		
Size: M	Size: M	Size: M
Weight: 31.1 lbs	Weight: 20.8 lbs	Weight: 15.6 lbs
Area of Coverage: 1,085 sq.in	Area of Coverage: 885 sq.in	Area of Coverage: 231 sq.in

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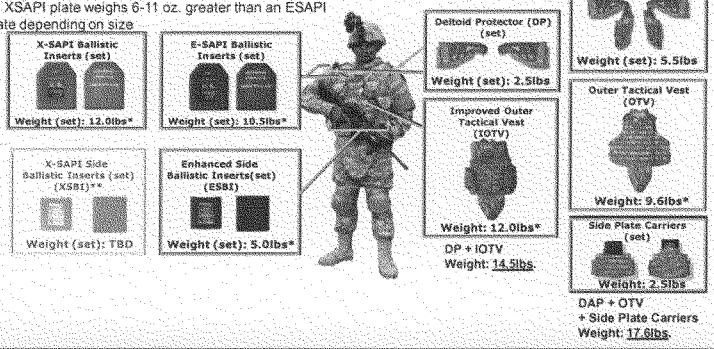
Interceptor Body Armor Configuration Baseline

An XSAPI plate weighs 6-11 oz. greater than an ESAPI Plate depending on size



Interceptor Body Armor Weights					
System	X-Small	Small	Medium	Large	X-Large
IOTV w Deltoid Protector /X-SAPI + ESBI	27.0lbs	29.4lbs	31.5lbs	34.5lbs	39.9lbs
IOTV w Deltoid Protector /E-SAPI + ESBI	26.1lbs	28.4lbs	31.1lbs	33.2lbs	38.5lbs
OTV w DAPS/E-SAPI + ESBI	29.1lbs	31.4lbs	33.1lbs	36.1lbs	41.6lbs

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** = X-SAPI Side Ballistic Inserts not yet procured

* = Weight in size medium

The weight of Special Operations Command (SOCOM) body armor provided to U.S. Army Soldiers is shown below:

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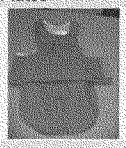
SPEAR Body Armor

SPEAR Tactical Land Systems

A Body Armor System consists of the carrier, soft armor and ballistic plate	Modular Body Armor Vest (MBAV) W / SPEAR Plates	Releasable Body Armor Vest (RBAV) W / SPEAR Plates	Low Visibility Body Armor Vest (LVBAV) W / SPEAR Plates	RBAV with Modular Supplemental Armor Protection*
Illustration				
Size	Medium	Medium	Medium	Medium
Weight	15.3 lbs	18.0 lbs	16.0 lbs	28.5
Area of Coverage	231 sq in	496 sq in	496 sq in	496 sq in
When Fielded	FY 05	FY 05	FY 05	FY 07

* Includes ballistic plates

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Marine Corps Answer. The total weight of each type of body armor currently in use is as follows:

- Modular Tactical Vest (MTV) = 32.6 lbs
- Outer Tactical Vest (OTV) = 29.4 lbs
- Scalable Plate Carrier (SPC) = 24.9 lbs

Question. Apparently, some commanders have requested a type of body armor called "Plate Carrier", which is considerably lighter than regular body armor. Do you favor "Plate Carrier" as an alternative to regular body armor?

Army Answer. Yes. I am in favor of plate carriers as an additional capability for commanders when conditions, e.g. enemy and/or terrain, means weight savings and requirements for mobility outweigh the extra protection provided by the Outer Tactical Vest/Improved Outer Tactical Vest. In order to develop an operational requirement, the Army will evaluate selected plate carriers in a Soldier Protection Demonstration in May 2009.

Marine Corps Answer. We are fielding the Scalable Plate Carrier (SPC) in addition to the Modular Tactical Vest (MTV). This provides commanders in the field with the flexibility to equip Marines based on operational requirements in consideration of the threat, environmental and operating conditions. The SPC is not a replacement for the MTV, which is our primary protective body armor. The SPC is roughly seven pounds lighter than the MTV but provides less coverage. It is used with the same Enhanced Small Arms Protective Inserts (E–SAPI) as the MTV and in the body areas covered by the E–SAPIs, the protection is identical. The SPC allows for greater mobility with reduced thermal stress in high elevations, thick vegetation and tropical environments than the MTV.

Question. Is the wearing of body armor ever optional?

Army Answer. There is no DA policy mandating the wear of body armor. Decisions regarding body armor are left to Commanders at the appropriate level based on sound tactical and operational requirements. When making decisions regarding body armor, the overriding concern of Commanders is the welfare of Soldiers.

Marine Corps Answer. Yes. The intent of the Marine Corps' policy defining Armor Protection Levels (APL) is to establish standards to enable commanders at the Lieutenant Colonel-level and above to tailor protective postures for their units based on the threat, climatic or other conditions, and based on guidance or direction from Service or theater combatant commanders. The lowest level of protection does not require body armor. Higher levels of protection require the Scalable Plate Carrier (SPC) or the Modular Tactical Vest (MTV) to be worn. The highest level adds the the Enhanced Small Arms Protective Inserts (E–SAPI) to either the SPC or the MTV.

Question. In the near term and long term, what is within the reasonable art of the possible for body armor? How can we achieve better protection with less weight?

Army Answer. The Army's Science and Technology (S&T) programs are pursuing performance enhancements through advances in high performance ballistic fiber and textile technologies, transparent polymers, composites, nanotechnology, and materials systems integration. The goal of this research is to produce lighter materials that will provide the same level of protection at significantly reduced weights. Efforts will continue to focus on collaboration with the medical S&T community to understand the effects of body armor designs on the human body. This collaborative approach seeks to provide holistic ballistic and blast protection to enhance Soldier survivability.

Marine Corps Answer. The Marine Corps uses a combination of continuous strategic market research, Quarterly Industry Days, and the Small Business Innovation Research (SBIR) program to leverage both Industry and the Research and Development communities. As it relates to body armor and reducing weight, the Marine Corps is currently pursuing SBIR efforts in the areas of developing a lighter weight Enhanced-SAPI (E–SAPI) plate. Within the current technology, lighter weight can only be achieved by trading off areas of coverage within the overall design of the system. Long term efforts to reduce the overall weight of body armor is likely to be contingent upon the development of a revolutionary new material that can meet, or exceed, current performance requirements.

Question. Are adequate inventories of body armor available for training and combat operations in the Army and Marine Corps?

Army Answer. The Army has procured sufficient quantities of Interceptor Body Armor (IBA) for combat operations and training requirements. The Army is currently procuring an Improved Outer Tactical Vest (IOTV) for the IBA to replace the older Outer Tactical Vests. The priority for fielding of the IOTV is deployed and deploying Soldiers. The Marine Corps will respond to you directly regarding their inventory and availability of body armor for training and combat operations.

Marine Corps Answer. Yes, the Marine Corps has adequate inventories of body armor available for training and combat operations.

LAND WARRIOR

Question. For a number of years the Army experimented with a technology designed to take communications and situational awareness to the level of the individual soldier. However, size, weight and power supply concerns eventually resulted in program termination. At approximately the same time one battalion set of equipment was put into service on an experimental basis in Iraq, in a Stryker unit. The Land Warrior equipment was found to be very desirable. Army equipment developers have resurrected the Land Warrior technology in the Soldier Ensemble program.

How much weight does the Land Warrior component that included in the Soldier Ensemble add to the load the individual soldier must carry?

Army Answer. The Land Warrior capability currently fielded to the 5/2 Stryker Brigade Combat Team (SBCT) adds approximately 13.3 lbs to the Soldier's load. The Land Warrior program was terminated in FY07 and is fielded to the 5/2 SBCT as an interim solution. The Ground Soldier Ensemble (GSE) program was established as a program of record in FY09 and passed Milestone A in January 2009. The GSE program is undergoing engineering development prototyping and design refinement that will determine the final weight of the ensemble. The threshold weight requirement is 14 lbs and the objective weight requirement is 10 lbs.

Question. As research and testing continue, what is the objective weight for this communications technology?

Army Answer. The Ground Soldier Ensemble (GSE) is the program of record that replaces the Land Warrior capability that has been fielded to the 5/2 Stryker Brigade Combat Team (SBCT) as an interim solution. The GSE program is undergoing engineering development prototyping and design refinement that will determine the final weight of the ensemble. The threshold weight requirement is 14 lbs and the objective weight requirement is 10 lbs.

Question. Does the radio in the Soldier Ensemble replace any other radio that is currently carried?

Army Answer. The radio in the Ground Soldier Ensemble (GSE) will not replace any other radio that is currently carried. The initial versions of the GSE will use the Combat Net Radio System (CNRS) as Government Furnished Equipment (GFE) and replace the CNRS with the rifleman radio of the Joint Tactical Radio System (JTRS) family of radios as GFE when it is available.

Question. What is the weight of the spare batteries for the Soldier Ensemble that a soldier must carry?

Army Answer. The Land Warrior program was terminated in FY07. There are two battery sizes used for the current Land Warrior system fielded to 5/2 Stryker Brigade Combat Team as an interim solution. The LI–145 weighs 2.25 lbs and the LI–80 weighs 1.15 lbs and are used as the mission (long or short) dictates. The current program of record, Ground Soldier Ensemble (GSE), may use these batteries, but the GSE is currently undergoing engineering development prototyping and design refinement. Advances in battery technology that provide lighter more powerful energy sources may be applied to GSE when they become available and other techniques to reduce battery weight may be used, such as improved power management and components that consume less power.

TACTICS, TECHNIQUES AND PROCEDURES (TTPS) TO REDUCE INJURIES DUE TO HEAVY LOADS

Question. The Army has formal and informal Tactics, Techniques and Procedures for doing about everything. Often the best, most effective way of doing something in the Army is figured out by the soldiers and sergeants and later is adopted by the Army and taught in the school house.

What Tactics, Techniques and Procedures have been developed to help foot Soldiers and Marines deal with all the gear they have to haul with them, including their own personal gear and the Soldiers' share of platoon equipment such as climbing gear or various weapons, ammunition, and sensors?

Army Answer. The Army has formal and informal Tactics, Techniques and Procedures (TTP). New TTPs that are adopted by the Army and taught in Army schools are often developed by Soldiers and sergeants at the lowest levels. Over the course of a deployment, Soldiers become more astute at cross-loading gear between patrol members. Soldiers identify multifunctional equipment to reduce redundant items. They emphasize carrying only mission essential items, leaving behind non-essential equipment. Soldiers conceal and cache water and food at forward locations for use

at a later date and for re-supply. Soldiers have effectively planned and used helicopter sling load operations and aerial resupply operations. Currently in Afghanistan an average of 11.7 short tons of supplies—to include liquids—are delivered per day to Soldiers via air drop. Over the past 12 months this averages roughly 750,000 to 800,000 pounds of air-dropped supplies per month. Some extraordinary situations permit Soldiers to incorporate the use of pack animals, such as the regular resupply efforts for several austere Observation Posts in Afghanistan and the use by US Army Special Forces in Afghanistan since 2001. Even when these TTPs are incorporated into missions, Soldiers often carry three days of supplies for a 24-hour patrol.

Marine Corps Answer. The Marine Corps is proactive in its approach to lightening the combat load that Marines carry in the field. We are pursuing solutions and exploring future initiatives that range from using new, lightweight materials, to policies designed to tailor armor protection levels that match threat conditions, to the use of robotics to assist in carrying unit equipment. We are keenly aware that the heavy loads carried by our Marines impact their endurance, effectiveness, mobility, and lethality as they fight lightly equipped irregular forces in places like Iraq and Afghanistan.

The Marine Corps has invested heavily in "Lighten the Load" initiatives through the Marine Corps Warfighting Lab and the Marine Corps Systems Command through the Program Manager, Marine Expeditionary Rifle Squad (PM MERS). It is important to note though, that many of the best tactics, techniques, procedures, and equipment ideas have been developed by individuals and small units during training and while deployed. The Marine Corps is committed to finding and following the best methods to "lighten the load," improve individual mobility, and thereby enhance the survivability of our Marines in combat.

The Marine Corps completed an extensive survey of individual Marines from December 2007 to February 2008, which determined that most survey participants believed that excessive combat loads negatively impacted their performance. Many of the lessons learned in this survey have been successfully addressed, and continue to impact the design, procurement, and testing of individual equipment.

The Marine Corps focuses on incorporating high performance, lighter-weight materials for individual weapons, ammunition, personal protective equipment (PPE), and uniform items. This focus has resulted in the development of such items as the Scalable Plate Carrier (SPC) for Marines deploying to Afghanistan. The SPC offers the same level of ballistic protection as the Modular Tactical Vest (MTV) in a configuration well-suited for the difficult terrain of Afghanistan. The SPC has achieved a 7.7 pound, or 24% reduction in weight from the MTV, which significantly increases individual mobility and maneuverability. Surveys and After Action Reports have told us that Marines have a strong preference for this system over the MTV. As a result, we have transitioned the SPC to be a program of record and are expanding the Acquisition Objective (AO) to 65,000 systems to equip the Marine Corps' entire Ground Combat Element (GCE).

Another item that Marines have expressed their support for is the Enhanced Combat Helmet. The Commandant recently made the decision to pursue the new helmet, which will be made of a new material that improves ballistic protection without increasing the weight of the helmet. In fact, the new helmet, which is shaped like the Army Combat Helmet, will actually weigh slightly less than a current helmet.

Other examples of reductions in equipment weight help illustrate the success the Marine Corps is achieving in this critical area. In response to comments from Marines deployed to Afghanistan, we are now developing the 3 Season Sleep System (3S). There is a compelling need in Afghanistan for a sleeping bag that increases thermal protection and comfort at reduced weight and volume. The 3S gains 15 degrees fahrenheit of protection, reduces weight by one pound, and reduces volume by 15 percent as compared to the existing Modular Sleep System.

Question. Are Soldiers trained and inspected on how to pack gear for the best distribution of weight?

Army Answer. Yes, soldiers are trained and inspected on how to pack gear in basic training and when they get their unit of assignment. The Soldier is taught the importance of packing his gear beginning in Basic Training, focusing on weight distribution to prevent injury and accessibility. This training is constantly reinforced in our operational units. Prior to going out on mission, leaders conduct inspections to ensure their Soldiers have the right equipment and it is packed properly. Our modular (molle-system) packs and required equipment can be modified for each mission. Leaders balance the benefit of reducing the weight our Soldiers carry with the risk of not having necessary equipment available if needed. During precombat inspections, Soldiers are inspected on the packing of their gear for the best

distribution of weight. Our current Army Combat Uniform (ACU) rucksacks and ballistic vests are designed to assist the Soldiers by allowing for a more effective distribution of weight based on mission requirements.

Marine Corps Answer. During entry-level and throughout their career progression courses, Marines are taught that it is a unit leaders' responsibility to plan for and conduct inspections prior to every tactical evolution. The Marine Corps includes pre-combat checks and inspection tasks for individuals, unit leaders, and small units in our Training and Readiness Manuals. Inspections of all types receive close attention by unit commanders and the pre-combat checks focused on the proper preparation and fit of individual equipment are among the most important of these inspections.

Because of the rapid fielding and improvement of individual combat equipment, the Marine Corps has also produced a number of media tools and training opportunities that help train individual Marines and their leaders on the proper adjustment, fit, and wear of the individual body armor. Many of these tools are available online and are accessible from Marines' home computers. Experience has shown us that training is a key component of ensuring Marines wear their equipment for optimal fit, function, and weight carriage. The use of New Equipment Training Teams (NETT) has also allowed us to go directly to the Marines to support the fielding of new equipment.

Question. Is there a hierarchy of what gear is left behind beyond a certain load weight?

Army Answer. There is not an Army-wide standardized hierarchy of what gear is left behind beyond a certain weight. After considering the mission profile and the anticipated threat level, commanders exercise command judgment to strike an appropriate balance between the dual imperatives of ensuring maximum feasible individual force protection and the requirement to accomplish the mission. In addition to individual protective equipment, the commander must also identify mission critical unit equipment to bring on the operation. Once these decisions are made and approved by the higher level chain of command, noncommissioned officers then enforce this load discipline and monitor Soldier well-being and safety.

Marine Corps Answer. The Marine Corps emphasizes the conduct of mission analysis and estimates of the situation. This essential leadership step allows unit leaders to appropriately plan for their mission, which includes planning to bring the gear and equipment necessary to accomplish their assigned tasks, and to plan for contingencies such as emergency resupply and requesting support from adjacent units. This planning evaluates guidance from unit commanders, environmental conditions, and the enemy threat.

Many individual Marines surveyed by the Marine Corps Warfighting Lab indicated they believed the authority to designate appropriate levels of personal protective equipment should be delegated to unit commanders. Consequently, the Commandant of the Marine Corps recently adopted a service policy granting the authority to determine the appropriate level of individual armor protection to unit commanders, lieutenant colonel and higher. This policy, which does not interfere with Joint or Theater Combatant Commanders' established policies, allows Marine commanders to appropriately scale personal protective equipment to meet the mission, environment, and threat in order to achieve optimum individual combat loads.

Question. Do units sometimes bring along extra soldiers in order to carry mission critical equipment?

Army Answer. When the Army develops combat systems, we integrate the materiel solution with doctrinal concepts, organizational design, training programs, leader development, personnel requirements, and, if necessary, facilities in order to create the required combat capability. Many items of combat equipment require multiple soldiers not only to carry but also to employ the system effectively. For example, we often cross load ammunition among multiple soldiers for unit weapons systems not only to lighten individual loads but also to ensure adequate quantities of ammunition make it to the objective. Likewise, an assistant gunner for a machine-gun crew will not only assist with target location but will also carry the tripod to lighten the gunner's load. Our process for developing combat capabilities accounts for these soldier load and system employment considerations in determining organizational designs and personnel requirements. Therefore, it would not be correct to state that units sometimes bring along extra soldiers in order to carry mission critical equipment. If the equipment is mission critical, then the soldier is also critical to the unit's ability to accomplish the mission.

Question. Do units sometimes bring along extra Marines in order to carry mission critical equipment?

Marine Corps Answer. Units conduct pre-mission planning to determine the number of personnel, weapons, equipment, and logistics required for a particular task.

In the event that a unit leader determines he requires additional personnel, it is up to them to identify their requirement up their chain-of-command for resolution.

I should point out that the Marine Corps rifle squad is a 13-man unit, whereas an Army squad is composed of 9 men. The greater size of Marine rifle squads allows a unit to spread their combat and mission-specific equipment across a greater number of individuals. In addition, the Marine Corps is procuring the Infantry Automatic Rifle to replace the M–249 Squad Automatic Weapon. This new lighter, more portable accurate weapon will consume less ammunition while making the individual Marine lighter and more lethal.

Question. What lessons have been learned thus far from operations in Afghanistan about dismounted, backpack operations in rugged and high altitude terrain?

Army Answer. The: leaders of the Army units operating in this rugged terrain have recognized that in order to defeat a highly mobile adversary, who is familiar with the terrain and often carries 75–100 pounds less in gear than our Soldiers, that operational changes and a lightened load were needed in the execution of missions. Over time these units have increased small unit operations that use a variety of patrol and infiltration routes, and create a smaller signature and a reduced resupply burden. These units have learned to conserve ammunition, food, and water, and to use clandestine cache sites and other resupply techniques such as helicopters, sling loads, and air drops. Brigade Combat Team and Battalion Commanders have authorized changes to the equipment posture to reduce weight and to match the load to the mission and the threat. Junior leaders in these units have adapted planning methods to identify multifunctional equipment and tailor loads based on the mission and the environment while also cross-loading mission essential equipment within the patrol. The Army recognizes the importance of replicating this demanding environment at the Combat Training Centers and home station pre-deployment training.

Marine Corps Answer. The Marine Corps Center for Lessons Learned is the repository of lessons learned from combat and is available to all Marines on the unclassified NIPR network. Each deploying infantry battalion produces lessons learned briefs that address a range of topics, but nearly always include observations about the impact of terrain and climate on individuals.

Units deploying to Afghanistan report that individual combat loads can often exceed 110 lbs. The earliest lessons learned from Afghanistan have directly impacted the decision and design of the Scalable Plate Carrier and Enhanced Combat Helmet.

Operations are best conducted by small units, who are able to move more effectively than larger units. These operations are often conducted for durations of up to a week because of the physical toll of moving in mountainous terrain.

In conducting estimates of the situation, it is necessary for units at all levels to conduct risk vs. mobility calculations. Small unit experiences in Afghanistan have established new movement rate factors for both dismounted and vehicle operations. Both dismounted and vehicle operations are significantly impacted by the difficult terrain. Across the board, unit commanders point to the training of their small unit leaders, Corporals and Sergeants, as one of the best investments that can be made to ensure successful operations in Afghanistan.

Question. What if anything has been done to improve the physical fitness of Soldiers to enable them to endure the weight of the pack?

Army Answer. The Army Physical Fitness School at Fort Jackson, South Carolina has drafted a new doctrine called Army Physical Readiness Training (Field Manual 3–22.20 / near-final draft) that aligns our physical fitness doctrine with our current operations and training doctrine. The Army's Training and Doctrine Command has already posted the draft manual on the Army Knowledge Online (AKO) for implementation and use by our leaders and Soldiers. The new Army Physical Readiness Training focuses on improving Soldiers' aerobic endurance, muscular strength, muscular endurance, power, and movement proficiency which physically prepares Soldiers and units to meet the physical demands of full spectrum operations.

Prior to the release of our new doctrine, many units across the Army, with the assistance of subject matter experts, had adopted a variety of injury prevention and performance enhancement physical fitness programs. For example, Special Forces and many Brigade Combat Teams have implemented programs that, in addition to traditional aerobic exercise, emphasize core strengthening, short term bursts of power, and speed and agility drills.

Additionally, prior to deployment, Soldiers wear their gear with increasing frequency to build physical endurance for long-duration missions.

Question. What if anything has been done to improve the physical fitness of Marines to enable them to endure the weight of the pack?

Marine Corps Answer. In MARADMIN 579/06 the Marine Corps announced a Concept for Functional Fitness designed to provoke debate within the Marine Corps

on the most effective approach for preparing Marines physically and mentally for the demands on combat.

The Functional Fitness Program is the commander's program. This program allows flexible, adaptive training that is focused on individual and unit requirements. Unit commanders preparing their units for operating in mountainous terrain of Afghanistan, for example can tailor their program to the specific physical rigors they expect to face. Marines, as combat athletes, need a comprehensive fitness program that will develop the physical skills necessary for combat; including core strength, endurance, speed, and coordination. The Marine athlete should be prepared for the physical challenges of combat with a program that develops both General and Specific Physical Preparedness—a program that integrates strength training based on functional, compound movements with multi-disciplinary speed, agility, and endurance training. The program should be intense and infinitely varied. The program must also be interesting—we want Marines to stick with it, and from all indications, it is working. Marines are excelling in the most demanding combat environments because of their preparation, training, and focus on injury prevention.

The Marine Corps Combat Fitness Test (CFT) is being implemented as a means of evaluating functional fitness by replicating a variety of physical challenges that Marines face in combat. The CFT measures readiness by requiring Marines in boots and utilities to sprint a timed 880 yards, lift a 30-pound ammunition can overhead from shoulder height repeatedly for two minutes, and perform a maneuver-under-fire event. The maneuver-under-fire event is a timed 300-yard shuttle run that requires Marines to pair up by size and perform a series of combat related tasks.

TRAINING

Question. The Committee understands that Soldiers and Marines carry combat loads often exceeding 100 pounds which limits their mobility and over time may cause stress injuries. The Committee also understands that to be ready for tough combat, the Soldiers and Marines must receive tough training.

While training at home station, do Soldiers and Marines carry the same equipment and weight that they will carry when deployed to Afghanistan?

Army Answer. Yes. Based on their anticipated mission, unit pre-deployment training plans routinely include activities such as road marches or negotiating stairs and obstacles with weighted vests and rucksacks to simulate combat load equivalent weights.

Unit commanders seek all reasonably available means to simulate the environmental conditions anticipated during the deployment. An individual Soldier's equipment weight is often determined by whether operations are mounted or dismounted, the duration of the operation, the frequency that the Soldier wears all of his equipment, and by individual duties.

Some unique items of equipment, such as special radios, are provided in the theater of operation. The units simulate the weight of the items when wearing their equipment for physical conditioning.

Marine Corps Answer. Marines train with the same individual equipment that they will deploy with. They will also train with the same type of major end items (i.e. Humvees, mortars, etc.), but will fall in on the equipment sets already in theater when they arrive in Afghanistan. This is the same procedure as Iraq.

Question. What sort of physical conditioning is done to prepare Soldiers and Marines for the heavy loads they will have to carry in Afghanistan during home station training?

Army Answer. Units most apt to carry heavy loads will invest additional time in more comprehensive physical fitness opportunities such as weight training, obstacle courses, combative activities, and timed distances marches over uneven terrain with their equipment. For example, Special Forces and many Brigade Combat Teams have implemented programs that, in addition to traditional aerobic exercise, emphasize core strengthening, short term bursts of power, and speed and agility drills.

Exercise periods are conducted with sufficient intensity, frequency, and duration to maintain adequate cardio-respiratory endurance, muscular strength and endurance, flexibility, and body composition.

Rather than just emphasizing aerobic and muscular endurance, the new draft Army doctrine, Army Physical Readiness Training (Field Manual 3–22.20 / near-final draft), focuses on improving Soldiers' aerobic endurance, muscular strength, muscular endurance, power, and movement proficiency which physically prepares Soldiers and units to meet the physical demands of full spectrum operations.

Marine Corps Answer. A combination of strength, mobility and anaerobic/aerobic endurance training is conducted by Marines prior to deployment. A typical week's physical training plan includes load bearing conditioning hikes, weight lifting using

compound functional movements and agility training such as sprint workouts with changes of directions and jumps. The goal of pre-deployment physical training is to enhance a Marine's physical capacity across a broad spectrum of physical skills. All training is done in a progressive manner with controls applied such as programmed rest to allow for adaptations and to mitigate injuries.

Question. How is physical fitness maintained once the unit has deployed to Afghanistan?

Army Answer. Many Soldiers maintain fitness through the routine execution of rigorous combat operations on difficult terrain and under various, often heavy loads. Physical Training (PT) programs vary by location and mission. Most locations offer access to a variety of physical fitness equipment and facilities. Units have a variety of PT plans based on mission, time, and troops available. Soldiers have also demonstrated remarkably innovative methods of constructing PT equipment and facilities in austere conditions. In addition, much of the Army's Physical Fitness Training Manual (FM 21–20) is dedicated to exercises that can be performed without the use of equipment, such as partner resisted exercises and calisthenics.

Marine Corps Answer. During deployment, Marines remain fit through the conduct of rigorous missions under demanding operational conditions, augmented by the continuous unit and individual physical fitness training which is a vital element of our Marine Corps regimen.

Question. How do the Army and Marine Corps prepare soldiers for high altitude operations such as those they will perform in Afghanistan?

Army Answer. The Army prepares Soldiers to conduct high-altitude operations by ensuring they are in the best physical condition possible prior to deploying. Soldiers conducting rigorous physical fitness training will more readily adapt to the demands of high-altitude operations. While units may not have the opportunity to train in mountainous areas, Soldiers can and do conduct physical training wearing their combat gear and incorporate road marches over uneven terrain and negotiate obstacles while wearing their equipment. High-altitude oxygen levels are difficult to replicate prior to arriving in theater, but the Soldiers adjust their physical conditioning activities upon arrival in theater to further improve themselves prior to assuming mission.

Marine Corps Answer. Fortunately, our Marine Air Ground Task Force Training Center (MAGTFC) in 29 Palms, California and our Mountain Warfare Training Center (MWTC) in Bridgeport, California closely approximate the environmental conditions (to include altitudes) found in Afghanistan Regional Commands (RC) South and East. Marine units deploying to RC South conduct their mission rehearsal exercise (MRX) at 29 Palms prior to deploying. Marine Embedded Training Teams (ETTS) deploying to RC East in Afghanistan conduct their pre-deployment training at the Mountain Warfare Training Center (MWTC) in Bridgeport, California, where the altitude ranges from 6,800 to 11,300 feet and there is significantly complex, compartmentalized terrain. At these two operational venues, Marines conduct a number of tactical exercises while exposed to Afghanistan-like environmental conditions.

Data Collection at Point of Injury

Question. The Military is not making informed decisions on improving Tactical Combat Casualty Care or body armor because currently the Department is not collecting the data. 67% of the wounded are returned to duty in theater, and many of those are not treated in a hospital. As a result, we have almost no information on what medical care was provided at point-of-injury. The OSD Committee on Tactical Combat Casualty Care states that less than 1% of all wounded has complete documentation.

Changes to training and equipment for first responders are the result of anecdotal "lessons learned", not data-based best practices. Without systematic data collection and analysis, far-forward medical care cannot improve.

What data would be beneficial in your minds to lighten or alter current body armor?

Army Answer. The following data would be important when assessing possible modifications to body armor: type and frequency of injury, activity that resulted in the injury, content of combat load carried, type of body armor, location (distance traveled, speed, grade), environment/climate conditions, length of patrol (days), prior training history with current equipment/load, fitness level (aerobic capacity, muscle strength, Army Physical Fitness Test), anthropometrics (body weight, height), medical history for previous injuries and predisposing conditions, job duties, physical activity within country and demographics (number of deployments, gender, age, edu-

cation, etc). It would also be beneficial to know how well the body armor fits, if it is comfortable, and the frequency and duration that it is being worn.

Data are being collected from numerous sources: the Army Joint Theater Trauma Registry and the Navy Trauma Registry collect extensive medical data on wounded in action service members and tracks combat injury patterns, general wound trends, treatments and outcomes. The Office of the Armed Forces Medical Examiner (OAFME) collects medical injury data, to include full-body CT scans on every returning killed in action service member and has received over 900 pieces of personal protective equipment (PPE). PEO-Soldier analyzes PPE received by the OAFME and has implemented PPE collection teams in Iraq to collect body armor from wounded-in-action personnel. The data collected includes the PPE and the available operational and intelligence data surrounding the event. The Army National Ground Intelligence Center tracks operational and intelligence data that surrounds fatal and/or wounding incidents. The Army Research Laboratory analyzes selected injury-producing fragments to identify new or unique characteristics.

The Joint Trauma Analysis and Prevention of Injury in Combat program combines the analysis of operational/intelligence, material performance (PPE and vehicular), and medical outcome data from combat incidents and integrates the data into actionable information. Equipment Analysis characterizes damage to the PPE from the wounding incident and drives requirements and design decisions and to develop biomedical standards. Threat and Operational Analyses look at weapon and material performance, threat trends, and incident lessons learned. Medical injury and outcome analyses lead to evidence-based changes in clinical practice and treatment. Actionable information derived from these analyses have led to direct feedback to combatant commanders to alter tactics, techniques, and procedures; confirmed the presence of weapons of interest; and guided program managers as they make equipment and vehicle modifications and upgrade decisions.

Marine Corps Answer. Optimally, we would like to lighten the service member's combat load without compromising protection from injury from every weapon system, including IED devices. This is a complex risk/benefit analysis that requires careful study. Lighter armor that does not adequately protect a Marine from known hazards is not acceptable but neither is armor that is unnecessarily heavy.

Question. Changes in force protection issues (e.g. body armor, eye protection) are not informed by point-of-injury medical information. Without this data it is impossible to know if recalled body armor performed to standard, and what changes are needed to improve body armor. Additionally, data on body armor success are lost when service members are treated and returned to duty, so the Army may accidently decrease protection. Data collected on body armor use at the hospital is error-prone and incomplete—it is something best collected by the first responder, not the surgeon.

If data is not collected adequately, how will increasing/decreasing the weight of body armor alter protection of the soldiers?

Army Answer. Battlefield point-of-injury medical information is valuable in helping to inform Personal Protective Equipment (PPE) decisions. However, point of injury data is difficult to collect due to the constraints of time and distance on the battlefield while working to keep wounded Soldiers alive. Arguably, point of injury data is not the only source of information for helping DoD in making these important PPE-related decisions. PPE development, fielding, and recall decisions should be informed by data collected from all available sources to include point of injury data, ballistic testing, research and development and experimentation data, intelligence analysis, operational risk analysis, and modeling and simulation programs.

Point of injury data provides the developers and managers of PPE with valuable information, however, is often insufficient to fully inform PPE decisions. For example, the Rapid Equipping Force (REF) developed a project to provide lightweight plate carriers to infantry units operating in the mountains of Afghanistan. The plate carriers would lighten the physical load and reduce thermal load on Soldiers as they fight an unencumbered enemy at elevations of 6,000 to 8,000 feet. To inform Senior Army Leadership decisions, the REF sought point of injury data from Joint Trauma Analysis and Prevention of Injury in Combat (JTAPIC) and U.S. Army Materiel Systems Analysis Activity (AMSAA) to help inform the decision for a plate carrier. Specifically, REF requested all gunshot wound data for all US Soldier combat casualties in Afghanistan for the year 2008. Data provided included only the gunshot wound points of entry for Soldiers killed in action during 2008. While information provided tremendous insight to the Army in their equipment selection process, collecting data took extensive man-hours and provided a limited data set. Furthermore, the data provided did not include the key information requirements of caliber of munitions and wounds that caused Soldier mortality.

Bridging the gap of information, REF requested extensive ballistic testing throughout the decision-making process, including Army standard protocol ballistic testing and special follow-on ballistic testing. REF also sought significant intelligence information from the warfighting J2 and the National Ground Intelligence Center (NGIC). In addition, REF requested the Army Research Lab's (ARL) support in conducting modeling and simulation to characterize the risk to the Soldier wearing a smaller vest know as the Modular Body Armor Vest (MBAV). ARL modeled injury analysis based on NGIC threat information and the characteristics of the MBAV.

Testing and analysis included actual threat ammunition and specialized gel frames that simulate human soft tissue and the actual MBAV coverage area. ARL conducted additional ballistic testing and extensive modeling to reliably predict both the severity and probability of injury to the Soldier based on both the Enhanced Small Arms Protective Insert (ESAPI) and soft armor coverage of the Soldier against threats the Soldier would likely face in this specific area of operations. The ARL data included several thousand gunshots against virtual Soldiers using specifically controlled variables to include muzzle velocity, caliber, point of aim, and human vital organ location relative to the edge of the MBAV, to name just a few. Again, while point of injury data is valuable in making PPE decisions, it is not as complete in comparison to using point of injury data used in conjunction with the data collected through ballistic testing, intelligence and modeling and simulation.

In summary, the REF utilized 2008 JTAPIC gunshot casualty data and additional ballistic, intelligence and modeling/simulation data to assist in determining the impact of the reduction in level III a (soft armor) coverage area of the MBAV. Additional gunshot "wound" data would have strengthened the analysis, but it was not available. The advantages of the approach used by the REF include:

(1) Infinite number of data points: ARL was able to simulate 15000 shots in three hours; JTAPIC data only included double digit (actual number classified) shots throughout 2008.

(2) Wide Range of threat: Using AMSAA data, ARL was able to conduct analysis simulating fragmentation (grenade), Assault Rifle (AK–47), Machineguns (PKM) and sniper weapons. JTAPIC casualty data did not identify threat weapon or caliber of threat round

(3) Experimental Control: Variables can be isolated; confidence in results can be increased through repetition; and results can be more precisely documented.

Additional potential improvements that should be considered: Although the modeling data provided greatly informed the decisions by Army Leadership, both ARL and Natick Soldier Research Development and Engineer Center have identified a shortcoming with the existing Soldier performance models. The models do not take into account the degradation and optimization of Soldier performance based on load or other enhanced capabilities relative to the risks of threats. A modeling tool that incorporates the threat modeling with soldier performance modeling would best show tradeoffs in protection and Soldier performance.

Also, the medical and intelligence communities would benefit from new tools that assist care providers in quickly collecting vital information about Soldier wounds. Medical professionals must quickly triage, stabilize, treat and evacuate our wounded Soldiers in combat. The tools available to medical professionals today lack sufficient capability to clearly and quickly collect detailed point of injury data. Such tools that help medical care providers quickly characterize our Soldiers' wounds would be invaluable in informing PPE decisions in the future. NGIC recently approached the REF with the concept of a tool that can assist first responders with the capability to collect wound data and associated threat data at the point of injury. This tool, if developed, could potentially allow more complete battlefield point-of-injury medical information collection that will not interfere with care provided to the injured Soldier.

Marine Corps Answer. Data on the effectiveness of body armor against a particular threat or set of threats is analyzed extensively before body armor is procured and fielded. Additionally, it is tested continuously as part of the acquisition process. If that test and evaluation did not happen then we would run a very probable risk of fielding body armor without truly understanding what capability we are or are not providing to our Marines, regardless of its weight. Additionally, when equipment such as body armor is fielded, we routinely conduct user surveys and follow-up evaluations to ensure that equipment is meeting mission requirements.

DATA COLLECTION AT POINT OF INJURY

Question. Limited medical intelligence on the effectiveness of enemy weapons is being gathered because of the lack of data collection. U.S. forces are unable to detect

minor changes to enemy weapons and tactics, they can only respond to major changes in hospitalization trends—which means a missed opportunity to prevent the injury.

What data are currently being collected to determine what body armor would benefit a soldier in a specific AOR or theater?

Army Answer. Data is being collected from numerous disparate sources: the Army Joint Theater Trauma Registry and the Navy Trauma Registry collect extensive medical data on wounded in action service members and tracks combat injury patterns, general wound trends, treatments and outcomes. The Office of the Armed Forces Medical Examiner (OAFME) collects medical injury data, to include full-body CT scans on every returning killed in action service member and has received over 900 pieces of personal protective equipment (PPE). PEO-Soldier analyzes PPE received by the OAFME and has implemented PPE collection teams in Iraq to collect body armor from wounded-inaction personnel. The data collected includes the PPE and the available operational and intelligence data surrounding the event. The Army National Ground Intelligence Center tracks operational and intelligence data that surrounds fatal and/or wounding incidents. The Army Research Laboratory analyzes selected injury-producing fragments to identify new or unique characteristics.

The Joint Trauma Analysis and Prevention of Injury in Combat program combines the analysis of operational/intelligence, material performance (PPE and vehicular), and medical outcome data from combat incidents and integrates the data into actionable information. Equipment Analysis characterizes damage to the PPE from the wounding incident and drives requirements and design decisions and to develop biomedical standards. Threat and Operational Analyses look at weapon and material performance, threat trends, and incident lessons learned. Medical injury and outcome analysis lead to evidence-based changes in clinical practice and treatment. Actionable information derived from these analyses have lead to direct feedback to combatant commanders to alter tactics, techniques, and procedures; confirmed the presence of weapons of interest; and guided program managers as they make equipment and vehicle modifications and upgrade decisions.

Marine Corps Answer. No specific data collection is underway at this time. The Marine Corps has three principal means to collect data and/or identify operational deficiencies. The first is through the Urgent Needs Process, whereby Marine units can identify deficiencies utilizing and Urgent Universal Need Statement (UUNS). The value of the UUNS is that it is submitted via the chain of command so that everyone can rapidly be informed of the deficiency and can take immediate steps to validate it and correct it. The second is through ongoing collection efforts at the Marine Corps Center for Lessons Learned (MCCLL). MCCLL archives all collected information, analyzes it, creates and distributes reports throughout the Marine Corps. These reports often provide the basis for making equipment decisions. Thirdly, individual Marines may submit suggestions and recommendations or identify deficiencies, via Email, telephone or mail, to the Marine Enhancement Program (MEP). The MEP serves to rapidly address requirements, particularly in infantry units.

Preventative Care and Operational Deployments

Question. The military departments have been focusing on identifying and mitigating health risks associated with heavy combat loads, through preventive and protective measures associated with deployments.

What specific preventative measures are being taken?

Army Answer. In general, carrying excessive loads may cause injuries or pain to the spine, lower extremities, and shoulders. Proper strengthening, conditioning, and training can help mitigate the risks associated with heavy combat loads. Many units use physical therapists to assist them in injury surveillance, data collection and injury prevention, as well as developing performance enhancement programs. The Ranger Regiment, Special Forces and several brigade combat teams (BCTs) have programs that emphasize core strengthening, muscle power, speed, and agility drills which not only strengthen the muscles that protect the spine, lower and upper extremities, but also improve the physiological responses to exercise. The Center for Health Promotion and Preventive Medicine (CHPPM) worked with the Army Physical Fitness School from 2001–2005 to develop, improve, and test the new Army Physical Fitness doctrine called Physical Readiness Training (PRT). They evaluated the PRT concept for its injury reduction potential at Individual Entry Training, Advanced Individual Training and operational Army infantry training (Fort Polk, 4th Bde of the 10th Mountain (MTN) Div). The program for 10th MTN involved PRT exercises, core strengthening, a decrease in running to three days a week or less

and aggressive strength training in multiple planes using pull-up bars, dip bars, etc. This resulted in a 20% reduction in overuse injury rates. The Rangers also used a performance enhancement program and had similar results. BCTs use their physical therapists to develop performance enhancement programs that reduce injury rates and improve overall fitness.

Marine Corps Answer. To prevent musculoskeletal injuries, Marines remain fit through the conduct of rigorous missions under demanding operational conditions, augmented by the continuous unit and individual physical fitness training which is a vital element of our Marine Corps regimen. Appropriate Operational Risk Management (ORM) procedures have been established to assess and mitigate risk with physical training while deployed.

Question. How do you sustain the programs that have been created to ensure a healthy force?

Army Answer. The Army Physical Fitness School at Fort Jackson, in collaboration with the Center for Health Promotion and Preventive Medicine (CHPPM), researched our physical fitness doctrine and found our current model that emphasizes aerobic and muscular endurance does not correlate well with the physical fitness requirements of current combat operations. To fill this gap, the Physical Fitness School designed a new doctrine called Army Physical Readiness Training (Field Manual 3–22.20) that aligns with our current operations and training doctrine. Army Physical Readiness Training focuses on improving Soldiers' aerobic endurance, muscular strength, muscular endurance (anaerobic endurance), power, and movement proficiency (incorporates balance, flexibility, coordination, speed and agility) which physically prepares Soldiers and units to conduct full spectrum operations. In addition, physical therapists assigned to the brigade combat teams, Special Operations units, and Initial Entry Training, serve as subject matter experts in injury prevention and performance enhancement. In this role, they assist unit leaders in developing programs that, in addition to traditional aerobic exercise, also emphasize core strengthening, muscle power, and speed and agility drills. Physical therapists also spend significant time educating the leadership on proper training techniques, conducting injury surveillance and reporting the trends back to the leadership who then modify the training based on the injury data. There are multiple injury prevention and performance enhancement programs across the Army, run by unit leaders with the advice and assistance of physical therapists. Proper injury surveillance, injury prevention and performance enhancement necessitates a concerted effort between the unit leadership, physical therapists, other medical personnel, CHPPM personnel, clinical researchers, and other Army proponents such as the Comprehensive Soldier Fitness Program. This requires an investment in research protocols that help identify best practices and assist in standardizing these programs across the Army.

Marine Corps Answer. Effective sustainment is accomplished by adequately resourcing and managing programs. Periodic program review and inspection are other program quality controls.

Question. How have changes in the school house been implemented based on injuries sustained during deployments?

Army Answer. Lessons learned from current operations in Iraq and Afghanistan and research conducted by the United States Army Center for Health Promotion and Prevention Medicine (USACHPPM), the Army Physical Fitness Research Institute (APFRI), and the U.S. Army Physical Fitness School (USAPFS) have resulted in significant changes in physical readiness training in the Institutional Army (school house). The training base has placed greater emphasis on physical conditioning to prepare our Soldiers for the rigorous demands of combat. These changes are most evident in Initial Military Training—Basic Combat Training, One Station Unit Training, Advanced Individual Training, and the Basic Officer Leadership Course. A key difference is placing less emphasis on the Army Physical Fitness Test and greater emphasis on physical conditioning and readiness. In basic combat training, Soldiers wear body armor, helmets, and carry their weapons to a much greater extent. Soldiers do more marching with rucksacks and other loads. The physical readiness program places greater emphasis on nutrition and lessons learned from sports medicine on how to avoid injury. Drill Sergeants and other IMT Cadre have modified their physical conditioning programs to account for the overall lower physical fitness of the teenage population volunteering to serve. They have changed fitness readiness training with a number of initiatives including a program called "Four for the Core" which focuses on the core muscles groups as they are actually used in the Army. Strengthening these core muscle groups helps to reduce injuries. Additionally, Drill Sergeants and other Cadre train proper lifting and loading techniques. The Army is staffing a new manual—FM 3–22.20 Army Physical Readiness Training. The new manual—based on the best practices of physical fitness training

and sports medicine includes greater emphasis on all the components—muscular strength, muscular endurance, aerobic endurance, anaerobic endurance, and mobility.

In our officer and noncommissioned officer courses, the Army is educating its leaders how to plan and conduct physical readiness training, teach nutrition, and train Soldiers to be "Tactical Athletes," who are prepared for the rigorous physical demands of combat. Officers and noncommissioned officers learn that improved physical fitness can lessen the chance of injury but there are physical limits to how much weight a Soldier can safely carry. Junior leaders learn how to plan patrols and other operations to limit the loads placed on their Soldiers. They further learn the importance of supervision and pre-combat inspections to prevent Soldiers from adding unnecessary weight to their loads.

Marine Corps Answer. A comprehensive review of USMC fitness programs began in Nov 2006. Key outputs of this review resulted in the following changes to Physical Training (PT) programs in Entry Level Training (ELT) and in guidelines for commanders in designing unit PT programs: Greater emphasis on anaerobic (short burst) capacity, de-emphasis of long distance running, increase in body movement skills (agility) and increase in progressive load bearing capacity. These changes are reflected in PT application, testing, and also in education of Marine leaders in the Training and Education continuum. Nutrition education begins in boot camp conducted by Semper Fit and continues in the T&E continuum as well.

Question. How have physical fitness tests been updated to reflect the current conflicts "lessons learned"?

Army Answer. The lessons learned from the operational environment have been applied to physical fitness training. Army training policy states, "Commanders will conduct physical training programs that enhance Soldiers' abilities to complete Soldier or leader tasks that support the unit's Mission Essential Task List . . . ." This focus ensures that Soldiers can accomplish their assigned tasks in combat versus pass a physical fitness test.

Lessons learned from the current operating environments in Iraq and Afghanistan led to a thorough review of physical fitness training and testing. This caused a shift from physical fitness training and testing to physical readiness training and assessment in support of full spectrum operations that we are conducting in Iraq and Afghanistan. Specifically, commanders have increased emphasis on total body muscular strength, flexibility, and anaerobic training to increase operational effectiveness and reduce the risk of injury associated with load carriage.

Marine Corps Answer. In May 2008, the Commandant of the Marine Corps (CMC) approved the Combat Fitness Test (CFT) which was implemented in Oct 2008. It is designed to be a complement to the USMC semi-annual Physical Fitness Test (PFT) which includes a 3 mile run, abdominal crunches and pull-ups for males/flexed arm hang for females. CFT events are: Movement to Contact (880 yd run), Ammo Lift (repetitive overhead lift of a 30 lb ammo can for two minutes), and Maneuver Under Fire. The last event is a 300 yd shuttle run which includes sprints, numerous changes of direction, a fireman's carry, buddy drag, ammo can carries and a simulated grenade throw. The CFT has helped shape USMC fitness programs, which will serve to enhance combat-related conditioning.

AIRDROP LOGISTICS SYSTEMS

Question. Soldiers and Marines on field operation must either carry their supplies with them or receive periodic resupply in the field. The Committee is aware that due to Afghanistan's rugged terrain and lack of infrastructure the Army frequently uses parachutes to resupply units in the field. Such airdrops use a variety of equipment and tactics to accomplish the resupply mission.

What are the factors that influence the decision to resupply a unit by airdrop?

Army Answer. Airdrop is a field service that can provide additional flexibility to commanders. It makes it possible to support ground operations that would otherwise be logistically infeasible. Airdrop enables forces to rapidly resupply critical items over extended distances directly to or near forward units when ground resupply is otherwise impractical or cost/risk prohibitive.

Airdrop is often militarily advantageous because it permits sustainment deliveries to units operating away from airfields and landing zones or in remote, difficult to access terrain. Airdrop also permits sustainment deliveries to units operating in hostile territory where ground sustainment convoys become a combat power intensive operation in their own right. Airdrop also allows the timely delivery of combat forces and materiel, concentrated and in mass, in minimum space and time (often with the element of surprise). Finally, some airlift aircraft can accurately airdrop

personnel and materiel in conditions of poor visibility that would otherwise preclude air/land operations (e.g., using the adverse weather aerial delivery system).

Marine Corps Answer. The factors influencing decisions to resupply a unit by airdrop are:

1. Urgency. How fast does the unit need to be resupplied?
2. The distance between the unit needing resupply and the resupplying base.
3. Surrounding terrain.
4. Air and ground threats to aircraft.
5. Rigging time of gear and equipment.
6. Availability of parachute riggers.
7. Aircraft availability.

Question. How many airdrop resupply operations occur on average in a month in Afghanistan?

Army Answer. On average, there are approximately 40 resupply operations during the winter months and 50 resupply operations during the summer months. There are more during the summer months because there are more operational missions during the summer.

Marine Corps Answer. On average, resupply air drops occur 40 times during winter months and 50 times during summer months in Afghanistan. Quantity difference is attributed to higher operational tempo in the summer months.

Question. What is the tonnage of supplies delivered by airdrop in a typical month in Afghanistan?

Army Answer. In Afghanistan, we currently average 366 tons of supplies delivered via airdrop per month.

Marine Corps Answer. The typical monthly tonnage of supplies delivered by airdrop averages 366.

Question. Please describe for the Committee the type of airdrops that are used, such as high altitude vs. low altitude, and the advantages and disadvantages of each.

Army Answer. During typical high altitude airdrop missions using fixed wing aircraft, we drop supplies from between 1500′–3000′ above ground level (AGL). We can drop supplies from as high as 6000′ AGL. We base the use of high altitude airdrops mostly on terrain and/or threat level. For low altitude airdrops, we can use Low Cost Low Altitude parachute systems during which supplies are dropped from 150′–200′ AGL.

High velocity (HV) parachutes are smaller in diameter and descend at a faster rate. We use HV parachutes to target small drop zones (DZ). We use HV parachutes on an average of six missions a month to deliver durable commodities such as water and MREs. For example, two DZs are only accessible through the use of HV parachutes because they are so small in size (one has a 300 yard radius; the second measures 380 yards × 110 yards). HV parachutes provide the ability to strike small areas with greater accuracy, but HV parachutes tend to "steal" air causing a few not to inflate thus destroying the load or just landing hard. A 10% loss using this method is considered an acceptable loss.

Low velocity (LV) parachutes are larger and descend at a slower rate. We use the LV parachute most often. LV parachutes provide greater survivability of loads. A disadvantage of using LV parachutes is they are a less precise method of delivery; strong winds can cause the parachute to overshoot the DZ making it impossible to recover either parachute or load.

Marine Corps Answer. Aerial Delivery Specialists speak in terms of high velocity (HV) versus low velocity (LV) air drops.

Conventional high velocity (HV) parachute air drops are conducted at altitudes of 1,500–3,000 ft above ground level (AGL). High velocity (HV) parachute air drops are conducted an average of six times per month. High velocity (HV) parachutes are primarily used with durable cargo.

Advantage:

Conventional high velocity (HV) parachute air drops are more accurate compared to conventional low velocity (LV) air drops.

Disadvantage:

It's possible that 30% of the cargo being air dropped will be damaged.

Conventional low velocity (LV) parachute air drops are conducted at altitudes of 150–1,250 ft above ground level (AGL). Low velocity (LV) air drops are preferred for precious cargo.

Advantage:

The survivability of cargo being air dropped is higher compared to high velocity (HV) air drops.

Disadvantage:

It's possible that 10% of the cargo being air dropped will be damaged.

Joint Precision Air Drop System (JPADS) air drops are conducted at altitudes of 4,000–24,500 ft mean sea level (MSL). The current Joint Precision Air Drop System (JPADS) being utilized in Afghanistan is the Joint Precision Air Drop System (JPADS) 2K Screamer, a system fielded through rapid acquisition. However, the Joint Precision Air Drop System (JPADS) 2K Firefly is the system of record and is currently being fielded throughout the Department of Defense (DoD), and will replace the Joint Precision Air Drop System (JPADS) 2K Screamer and Joint Precision Air Drop System (JPADS) 2K Sherpa.

Advantages:

It allows the aircraft to stand off at a greater distance, minimizing ground threats.

The aircraft stand-off will also enable clandestine resupply of reconnaissance forces without giving away their positions.

Increased survivability of load.

The Joint Precision Air Drop System (JPADS) allows multiple loads to be dropped from the same aircraft on one pass with different drop zones programmed into the Airborne Guidance Unit (AGU).

Increased accuracy of desired point of impact.

Disadvantages:

Cost of system compared to conventional parachute systems.

The Airborne Guidance Unit (AGU) will need to be recovered.

Question. What types of parachutes are available for airdrop logistics missions? Are they precision or non-precision parachutes?

Army Answer. We use five different types of non-precision parachutes in Afghanistan. Three Low Velocity (G–11, G–12, Low Cost Low Velocity) and two High Velocity (Low Cost High Velocity, 26 foot High Velocity). The Firefly is the only precision parachute currently used in Afghanistan.

Marine Corps Answer.

Non-Precision Parachute Systems (Conventional Parachutes):

1. G–11B
2. G–12E
3. G–14
4. A family of Low Cost Air Delivery System (LCADS), Low Cost Low Velocity (LCLV) and Low Cost High Velocity (LCHV) parachute systems.
5. 26 Ft high velocity (HV)

Precision Parachute Systems:

1. JPADS 2K Firefly
2. JPADS 2K Screamer (current system being utilized in Afghanistan)

Question. Are the parachutes recovered after use?

Army Answer. The Low Cost Low Altitude parachutes are not recovered after use. The receiving unit disposes of them. Less than 1% of the parachutes returned are reusable.

Marine Corps Answer.

Parachutes are normally recovered; however, recovery can be waived by units, depending on the tactical situation.

The Joint Precision Air Drop System Airborne Guidance Unit (JPADS AGU) will need to be recovered.

Question. Are any airdrop operations accomplished by contractor support?

Army Answer. Contractors do not build or inspect the loads. Product Manager Force Sustainment Systems' Forward Service Representative (FSR) at Bagram Airfield, provides technical support (maintenance, packing, software updates to the GPS system, etc.) to the 95 Firefly parachutes. Blackwater Aviation pilots fly the CASA 212/235 aircraft from which military personnel drop loads using Low Cost Low Altitude parachutes. Only military personnel are responsible for pushing the load out of the aircraft. Blackwater Aviation employees are based out of Bagram Airfield.

Marine Corps Answer. Xe (formerly known as Blackwater Company) conducts a large percentage of the Low Cost Low Velocity (LCLV) air drops out of CASA 212 aircraft. They currently conduct these air drops three days a week, mostly to the Army Special Operations Forces.

Question. What is the cost of the various airdrop parachute systems?

Answer. Costs vary from $539 to $36,000, as shown following.

Parachute System	Cost
G–11	$8,721
G–12	3,769

Parachute System	Cost
Low Cost LV	1,680
Low Cost HV	539
26ft Ring Slot (High V)	911
Firefly precision parachute	36,000

Marine Corps Answer.

1. Joint Precision Air Drop System (JPADS) 2K FireFly—$65,000
2. Joint Precision Air Drop System (JPADS) 2K Screamer—$30,000
3. G–11B—$8,721
4. G–12E—$3,769
5. G–14—$595
6. 26 Ft High Velocity (HV)—$911
7. Low Cost Low Velocity (LCLV)—$1,680
8. Low Cost High Velocity (LCHV)—$539

MULTIFUNCTION UTILITY/LOGISTICS AND EQUIPMENT VEHICLE

Question. The foot soldier has always carried a substantial load including weapon, water, food and shelter. With advances in warfighting technology the soldier's load has added body armor, batteries, mines and platoon equipment. The Army may add to the soldier's load an individual communications device such as Land Warrior, micro unmanned air vehicles, various sensors, small robots, and more batteries. Soldiers and Marines that fight on foot are experiencing increasing numbers of stress injuries related to the heavy loads they carry. However, one of the 14 systems of the Army's Future Combat Systems is the Multifunction Utility/Logistics and Equipment Vehicle (MULE). It is essentially a small robotic truck. The "MULE" is being developed in three variants: armed, countermine, and transport.

Please explain for the Committee how the transport variant might somewhat lessen the load for the foot soldier.

Answer. The MULE–T has the primary mission of supporting dismounted infantry by transporting 1900 lbs, which is the equivalent of two squads of equipment. Equally important, the MULE–T provides the commander flexibly to support many missions. The MULE–T provides other options or capabilities such as transporting other provisions necessary to the mission: ammo, food, water, batteries; short-term emergency casualty evacuation; integrated battery recharger; Chemical, Biological, Radioactive, Nuclear detection systems; and Ground Mobile Radio, which can provide a communications relay for dismounted operations; and utilization as a resupply vehicle, to send back to supply points.

The MULE–T is a force multiplier. It reduces potential injuries and eases the wear and tear on the Soldier by shouldering much of the Soldier's basic load. The MULE–T will enhance the dismounted Soldiers' ability to engage the enemy after long marches over difficult terrain.

The MULE–T has demonstrated the mobility to keep pace with the dismounted Soldier. The MULE Engineering Evaluation Unit (EEU) has accomplished the following: climbed a Jersey barrier, traversed a 1-meter step, negotiated a 1.8 meter gap and achieved speeds of 55kph. This mobility supports the rigors faced by the dismounted Soldier, and with a maximum speed of 65kph, the MULE can support and keep pace with the mounted force.

Question. How useful would such a vehicle be in rugged, mountainous terrain as encountered in Afghanistan? How useful would such a vehicle be for the type of operations ongoing in Iraq?

Answer. Based upon the ability to negotiate 60 degree slopes, the Tweel technology and the six-wheel independent articulating suspension, the MULE would be very useful in both theaters of operation (Afghanistan and Iraq). The MULE is a diverse platform, with three variants: Armed Reconnaissance Vehicle-Assault (Light) (ARV–A (L)), MULE–T and MULE-Countermine (MULE–CM). Employment in an operational environment (OE) is dependent upon Mission, Enemy, Troops, Terrain, Time Available and Civilians (METT–TC). Tactically, ARV–A (L) can be employed to establish support by fire positions in all OEs, and it can be utilized as the first asset to engage enemy combatants with its firepower capabilities, thereby forcing the enemy to commit its position, giving friendly forces the ability to maneuver and engage the enemy out of contact.

The MULE-Transport can be used to carry two dismounted infantry squads' combat equipment, or provide logistical support to mounted and dismounted forces by carrying 1900 lbs of resupply, repair parts, squad equipment, or perform emergency Casualty Evacuation (CASEVAC) to a casualty evacuation point.

The MULE–CM, together with Ground Standoff Mine Detection System (GSTAMIDS) capability, will support mounted force's movement through mine detection and neutralization situations. The MULE–CM will have the capability to detect, mark lanes, and neutralize anti-tank mines while mitigating the warfighter's exposure to life-threatening situations by placing an unmanned ground system in danger first.

Question. How is the MULE powered?

Answer. The MULE is powered by a diesel electric system. This engine, when coupled with the generator, is capable of generating 116KW (mech)/100KW (Elec) 610 Volt power. Power is generated to articulate each of the six suspension arms independently on the platform. The power also provides 610 Volts DC to power the mission equipment package for the ARV–A (L) and MULE–CM. The 28 Volts DC is provided to run all of the computers and electronic systems.

Question. Please explain how the autonomous navigation system works.

Answer. The autonomous navigation system (ANS) has four basic modes of operation: waypoint navigation or route following, leader-follower (vehicle), leader-follower (soldier), and teleoperations. The ANS is a unique combination of hardware (sensors), global positioning satellite/inertial navigation system (GPS/INS), and navigation software that takes sensor input and derives a safe and efficient path for the unmanned platform to travel.

In the teleoperations mode the ANS provides situational awareness and driver's aids to the operator including obstacle cueing and vehicle orientation. The ANS is the primary driving and awareness sensors. The sensors provide capability for daytime, low-light conditions, and infrared sensors for nighttime operations.

Semi-autonomous operations are handled in several different modes. In the leader-follower (vehicle) mode, the ANS receives position and route information from the leader vehicle and commands the MULE to essentially follow the same positions. The ANS also provides local awareness and obstacle detection/avoidance in this mode, modifying the route as required.

In the leader-follower (Soldier) mode, the ANS provides the same services, as well as maintaining a safe distance from the followed Soldier.

In the route-following mode, the ANS receives global information from the network. The ANS develops routes and alternative routes, utilizing models to select the best route to meet the mobility plan, and then generates a route plan.

Question. Has the transport MULE demonstrated technology readiness sufficient for fielding as part of the early spin out of FCS equipment to light infantry forces?

Answer. No, the MULE is not ready for fielding under the early spin out. The MULE is an integrated platform requiring not only its mobility but the ANS, network communications (radio and waveforms) and the Common Controller with its Battle Command Software to control the platform. The MULE–T, as an integrated platform with all of the supporting subsystems, is preparing for Integrated Qualification Test (IQT) in May 2011.

The MULE Early Evaluation Unit has demonstrated the following mobility: climbed a Jersey barrier, traversed a 1-meter step, negotiated a 1.8 meter gap and achieved speeds of 55kph. The ANS, which provides the critical sensors/software to conduct unmanned operations, has demonstrated similar success during the summer of 2008 with prototype testing at White Sands Missile Range. The ANS prototype platform accomplished speeds of 36 kph with waypoint following with obstacle avoidance, 40 kph under leader-follower conditions with obstacle avoidance, and a maximum speed of 54 kph with waypoint following but no obstacle avoidance.

Question. Will the MULE be part of the first FCS equipment spin out? If so, what is the distribution plan?

Answer. No, the MULE is not part of the first FCS spin out effort to the Early IBCTs. Currently, the MULE program will conduct a dual Critical Design Review (CDR): the MULE–T CDR is scheduled for January 2010, and the ARV–A (L) and MULE–CM CDRs will be conducted in May 2010. The MULE–T Individual Qualification Test (IQT) will start May 2011, followed by the ARV–A (L) and MULE–CM IQT in November 2011. The MULE is currently scheduled to be fielded as part of the Spin Outs to the Threshold IBCTs in 2015.

RESEARCH IN NEW CARGO CARRYING DEVICES

Question. The Committee understands that the Defense Advanced Research Projects Agency is conducting research projects in search of a robotic pack mule. One project is referred to by the nickname "Big Dog." The device is about the size of a large dog. It has mechanical legs, and can carry up to 340 lbs.

Has the Army or Marine Corps participated in the development phase for this or a similar program?

Army answer. The Tank Automotive Research, Development, Engineering Center (TARDEC), as part of the U.S. Army Research, Development, and Engineering Command, has executed $2 million since 2003 to develop a perception module for the "Big Dog." TARDEC is actively participating in DARPA's Source Selection Board for a follow-on effort to the "Big Dog."

Marine Corps answer. The Marine Corps supported the most recent development phase of Big Dog through a Memorandum of Agreement between the Marine Corps and DARPA with a total Marine Corps investment of $750,000. During this phase, the Marine Corps established a military utility assessment of a legged robot carrying a 81mm mortar, bi-pod, base plate, and support equipment (approximately 200 lbs) at the pace of a walking Marine over a representative cross-compartment hiking trail and for five miles on a flat surface. This assessment was completed satisfactorily in August 2008.

Question. Does the Army or Marine Corps plan to transition this device, or a similar device to a service program to develop a system to move logistics with the soldier, and to take some of the weight out of the soldiers back pack?

Army answer. The FCS MULE-Transport (approved in the FCS Operational Requirements Document) is currently the Army program which will provide robotic logistics support to the dismounted Soldier with a Milestone C in 2013 and first unit equipped slated for 2014, but not all units will be fielded the system. Because the FCS MULE effort pursues a mounted formation construct and the Soldier load problem is also associated with dismounted Infantry units not utilizing vehicle support, the FCS MULE may not be suitable for all formations.

The Army and Marine Corps are assessing a variety of unmanned ground vehicles to lighten the Warfighter's load, but outside of the FCS MULE system, there are no other currently validated requirements to support the initiation of a Service program.

The Army and Marines did assess the "Big Dog" and will assess its follow-on Legged Squad Support System (LSSS) for military utility and effectiveness through a series of Warfighter assessments. Currently, there is no agreement on "Big Dog" in place between DARPA and the Army on transition to program of record, acquisition, fielding and sustainment. To entertain transition, the Army would have to endorse a development path that DARPA constructs that would give confidence that a reasonable Technical Readiness Level (TRL) could be achieved such that the Robotic System Joint Program Office could complete development. "Big Dog" is currently assessed at TRL 6 (System Prototype Demonstration in a relevant environment) and this assessment usually translates to several years required to mature to a producible system, if fully funded. Currently, there is no plan to endorse the development path. Based on current assessments, the potential for operational employment of "Big Dog" is not viable in the foreseeable future.

One system currently being assessed that shows promise is the Squad Mission Support System (SMSS). A Limited User Test (LUT) is being executed in 1st Quarter, FY10 with a follow on assessment in OEF during 2nd Quarter, FY10. The SMSS Technology Readiness Level (TRL) is 7/8 and targets the immediate problem of robotic soldier load solution integration. The Capabilities Production Document (CPD) will provide a full and open competition solution within three years. The Subsequent Product Improvement Program will reflect lessons learned.

Marine Corps answer. There is currently no plan to transition the Big Dog or any similar legged robot to a service program of record. The technology still requires considerable refinement before it has operational utility. In view of the technological immaturity, DARPA has developed a proposed follow-on project called the Legged Squad Support System (LS3) which would build on the technical advancements made during the Big Dog program. Should this program be approved, the Marine Corps Warfighting Laboratory has expressed the intent to continue involvement in the development and assessment of the military utility of such technology in reducing the load of dismounted Marines and in logistically supporting infantry units.

Question. What would be the desirable characteristics of a small mechanical device to assist the dismounted soldier or Marine in carrying essential gear?

Army answer. The following are the desirable characteristics of a small mechanical device to assist the dismounted Soldier or Marine in carrying essential gear:

—follow dismounted operator semi-autonomously (follow a designated soldier's path)

—200 meters line of sight (Threshold); 1000 meters line of sight (Objective)

—1.8 miles per hour steady march

—15 miles per hour burst speed for 200 meters

—capable of autonomous navigation to preprogrammed waypoints on command; high mobility, agility and dexterity; laterally traverse—30% slope; climb/descend—60% slope

—ability to avoid same obstacles as a Soldier
—sustainable/maintainable
—maintain operational readiness rate of 92%
—meantime between system abort—110 hours
—meantime between essential function failure—37 hours
—meantime to repair—not to exceed 30 minutes;
—maximum time to repair—10.5 hours
—place into operations within 7 minutes with no special tools; 700 lbs (Threshold); 1300 lbs (Objective) payloads
—low noise signature—operate at a noise level that will not compromise the location of a squad
—Endurance—24 hours (Threshold); 72 hours (Objective) using standard military batteries
—transportable/deployable—deployable by air, sea, and rail; capable to be airdropped

U.S. Army Training and Doctrine Command began formal staffing of the capabilities document for the Squad Multipurpose Equipment Transport at the end of April 2009, focusing on leader/follower and some semiautonomous movement (threshold payload—700 lbs) to lighten Soldier load. The objective is approval of the capabilities document no later than 1st Quarter, FY10 with a projected date for Initial Operating Capability of 3rd Quarter FY12.

Marine Corps answer. There is currently no comprehensive Marine Corps list of key performance parameters for mechanical devices. However, several "mechanical device" approaches may have utility in assisting the dismounted Marine in carrying essential gear: (1) exoskeleton to assist the individual's innate strength and endurance, and (2) a robotic ground vehicle. For the first approach to be feasible would require that the system provide load bearing capability for a representative militarily useful period of use (2 to 4 hours) across a variety of terrain at a pace at least equal to dismounted forces, using on-board power. For a vehicle to be useful, it would have to carry a minimum of 450 pounds, be capable of keeping up with and following in trace of dismounted forces in typical cross country terrain, and have the capability of conducting a typical 24-hour profile with on-board power or fuel. Ideally, a robotic ground vehicle would also be capable of "supervised autonomy" following a designated Marine at an assigned distance, following a roadway or trail, following GPS waypoints, and be capable of obstacle avoidance. Both technology approaches must be capable of operation with minimal sound signature and be maintained and supported by infantry Marines with minimal training and without detracting from their tactical responsibilities. Because of ongoing experimentation, the Marine Corps is not prepared to formalize the list of requirements or establish key performance parameters at this time.

Question. What are the obstacles facing current efforts to field a mechanical mule?

Army answer. The biggest issues facing a mechanical MULE are balancing a solution to various performance requirements for both Army and Marine Corps units and unit types that provide military utility for a MULE. These range from as simple as vehicle size (i.e. does it support a team, Squad, platoon, Airborne, Air Assault?); mobility requirements (i.e. should it support only dismounted Soldiers, should it support both mounted and dismounted, what are the terrain profiles it has to navigate?); technical supporting requirements (i.e. what level of autonomy/control should it have, what level of anti-tamper should be built into the system, what are its maintenance and repair requirements, should it be air droppable?). Each of these requirements can drive a drastically different material solution impacting both technical and cost risks. The Army is developing a common MULE chassis that will be used to support the Soldier logistics of two squads, mine detection, and unmanned armed reconnaissance. These UGVs are designed to support Soldiers in a following mode both when they're mounted and dismounted.

Marine Corps answer. The Marine Corps has not developed a specific requirement for a ground vehicle—a "mechanical mule"—to logistically support or lighten the load of dismounted Marines. Further study to define the key performance parameters needed for such a capability is necessary before the Marine Corps can determine if this approach is supportable, affordable, and the best solution to the identified problem.

Question. Are there any other technologies or devices that the Services are looking into as well?

Army answer. The Army is pursuing multiple technologies that would enable the Soldier to carry greater loads. The technologies fall into two categories, (a) Soldier borne load carrying technologies and (b) autonomous unmanned ground vehicles (UGV) technology similar to the robotic pack mule.

The Natick Soldier Research Development Engineering Center (NSRDEC) is pursuing two technologies to enhance a Soldier's ability to carry heavy loads in the future. The eXOSkeleton (XOS) for logistic support project is a powered, full body wearable robot for human performance augmentation. XOS is expected to assist Soldiers by augmenting manual handling/materials handling capacities up to 200 pounds (lbs). NSRDEC's Enhanced Load Carriage for the Lower Body effort is focused on the development of a simple lightweight, low-power, wearable leg brace type device to increase Soldiers' load carrying capacity to 150 lbs with reduced biomechanical stress to the user.

The Army is also developing the Multifunctional Utility/Logistics and Equipment (MULE) Vehicle, a 2.5-ton Unmanned Ground Vehicle (UGV) that will carry 1,900–2,400 pounds of equipment and rucksacks for dismounted infantry squads.

Additionally, there are a number of smaller eXperimental Unmanned Ground Vehicle (XUGV) efforts that Army Science and Technology (S&T) uses as test beds for the purpose of developing and maturing technologies for unmanned ground vehicles. Technologies under development and/or maturation include safe operations (detect/track moving objects), obstacle avoidance, and platform control ranging from teleoperation to semi-autonomous (platform autonomy with Soldier-in-the-loop).

Marine Corps answer. The Marine Corps has been observing Army experimentation using robotic ground vehicles at Fort Benning and the robotic vehicle being explored by the US Special Operations Command sponsored Combat Autonomous Mobility System (CAMS) Joint Concept Technology Demonstration. In addition, the Marine Corps Warfighting Laboratory is exploring the utility of both autonomous ground and air systems for sustaining dismounted forces in planned experiments during July–August 2009 and has solicited industry response to a Request For Proposal for current unmanned air delivery systems capable of demonstrating tactical utility as early as this summer.

[CLERK'S NOTE.—End of questions submitted by Mr. Murtha.]

WEDNESDAY, MARCH 11, 2009.

ARMY AND MARINE CORPS READINESS

WITNESSES

GENERAL PETER W. CHIARELLI, VICE CHIEF OF STAFF, UNITED STATES ARMY

GENERAL JAMES F. AMOS, ASSISTANT COMMANDANT OF THE MARINE CORPS

INTRODUCTION

Mr. MURTHA. This afternoon's hearing is on the readiness of the Army and the Marine Corps.

I am going to put my whole statement that the staff prepared in the record, but the meat of it is that only 8 percent of the Army is C–2 or better. Only 50 percent of the Marine Corps is C–2 or better, and we know that is substantially lower than it was just a few years ago. So our problem is, what do we have to do in order to help you fix that problem.

I know you are under orders from the White House. You can only talk about certain things; you don't know exactly what the White House is going to propose. But we have been working on this subcommittee for years, putting reset money in, putting all kinds of things in the budget which we think are so important to the troops out in the field.

And there is a very small percentage of people who are actually doing the fighting and very small percentage of families that are actually involved. And we know how hard it is on them. We want to help alleviate that as much as we can.

I know you are going to present us a better picture than we see. But when I was in the field at Fort Carson, I haven't seen as many complaints as I heard since 1974. And I talked to 12 people at Parris Island in 1974; I talked to 12 people at Fort Carson just a few weeks ago. So as I have said over and over again, our intelligence hadn't predicted anything, so none of us know. But if we continue to stress guerilla warfare and wear our troops down, if some other contingency happens, we are not going to have what we need in order to meet that contingency.

So we appreciate your coming before the committee; we appreciate your dedication. And you inherited a very difficult job, both of you. And so I look forward to hearing your testimony.

But we have a motion from Mr. Young.

Mr. YOUNG. Mr. Chairman, I move that those portions of the hearing today which involve classified material be held in executive session because of the classification of the material to be discussed.

Mr. MURTHA. Mr. Young, comments?

Mr. YOUNG. Mr. Chairman, I appreciate the comments that you made. And I think it might be helpful to the committee if we had

some examples of why the C–2 level, C–3 level, what actually causes degradation of the standing, because sometimes I understand they are not really that big a deal, but maybe they are.

So I think it would be helpful for us to know that.

Mr. MURTHA. General Chiarelli.

SUMMARY STATEMENT OF GENERAL CHIARELLI

General CHIARELLI. Well, sir, as you know, we have and we are moving to a readiness system that will take us in two directions. One is, we will give you our rating on what our core mission is—that mission for which the unit was designed, as opposed to our deployment mission; that mission which the unit is about ready to embark on.

Because of the demand on the force, a majority of our forces are, in fact, training to and equipping to that mission they are going to deploy on, which is much different than that mission which they were designed for. And I think when you see those low C–2 numbers in the Army—in fact, I know when you see those low C–2 numbers—that is for core mission rather than the mission they are about to deploy on.

And we deploy differently for that deployment mission with much of the equipment that you pick up when you deploy, what we call TPE, theater-provided equipment, that you fall in on when you arrive.

A good example would be MRAP. We have only 25 MRAPs back in the States today that we are training on. We are bringing back another 26. We have one full motion simulation training at Camp Shelby, and we will have another 13 fielded by October of this year. So the training on MRAP right now, for the most part, has to take place downrange, a conscious decision that we made.

Why? We made it because we felt it was more important to put soldiers going into harm's way in MRAPs rather than bring them back and be part of the training base.

So I think the C numbers you are seeing are because we, with the demand on the force, with only having 1 year deployed, 1.3 months back at home, units are neither equipping nor training for their C mission; they are training for that mission they are about ready to deploy on, which is different than that C-rating you read.

[The statement of General Chiarelli follows:]

RECORD VERSION

STATEMENT BY

GENERAL PETER W. CHIARELLI
VICE CHIEF OF STAFF
UNITED STATES ARMY

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON DEFENSE

FIRST SESSION, 111TH CONGRESS

ON ARMY READINESS

MARCH 11, 2009

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
COMMITTEE ON APPROPRIATIONS

STATEMENT BY
GENERAL PETER W. CHIARELLI
VICE CHIEF OF STAFF
UNITED STATES ARMY

Chairman Murtha, Ranking Member Young, and distinguished members, I thank you for the opportunity to provide a current status on the Readiness of the United States Army. I thank you for your support for our Nation's Soldiers and their Families who bear the burdens of a Nation at war.

Our Nation has been at war almost eight years, and the Army continues to serve proudly. I consider it an honor and the very highest privilege to report to you on behalf of the 1.1 million Active, Guard, and Reserve Soldiers and their Families on the readiness of the United States Army.

Seldom in the history of our Country have we asked *so much* from *so few*. America's Army has performed with a resiliency and professionalism beyond compare. The forces we are deploying are the best manned, equipped, trained, and led this Nation has ever sent to combat, and we don't ever want them to be in a fair fight with the enemy. The conversion of the Army to a Full Spectrum Force; one that can move seamlessly between offense, defense, and stability tasks across the spectrum of conflict; represents an incredible transformation of the Army as it adapts to the ever changing challenges of the strategic environment.

The near future will be characterized by a persistent commitment of the Army against state, non-state, and individual actors who will use irregular means to threaten vital American interests as they seek to achieve their political and ideological ends. These adversaries will exploit and leverage incredible technological and informational opportunities, and cultural differences to threaten U.S. interests. Our Soldiers and formations must be versatile enough to confront the hybrid nature of conflict balancing kinetic and non-kinetic means *among the populace*, and adaptable enough to employ strategy to dominate the spectrum of conflict. My own experience overseas confirms

that our Soldiers and our Army live the 'three-block war' predicted by former Marine Corps Commandant Charles Krulak. We translate Krulak's 'three-block war' through our capstone operational concept: *Full Spectrum Operations*.

Yet, as has been outlined to this committee before, the Army is out of balance. The demand on our Brigade Combat Teams, Combat Service and Combat Service Support formations, and Individual Augmentees, is simply outstripping the supply needed to provide the Nation strategic depth for contingencies beyond Iraq and Afghanistan. The cumulative impacts of almost eight years of war are having impacts on the readiness of the Army. Institutional systems designed for a pre-9/11 Army are strained. Readiness is being consumed as fast as we can provide it. Given the theater demand for Army forces, our Soldiers and Families, support systems, and equipment are stretched and stressed. This lack of balance poses a significant risk to the All Volunteer Force and affects the ability for the Army to provide forces for alternative contingencies.

The key to current and future readiness is getting the force back in balance – where we are deploying forces at sustainable levels and can provide combatant commanders with forces trained for the full range of missions. Two years ago the Chief of Staff of the Army, General George Casey, outlined a vision to not only restore balance to the Army, but to also set conditions for the future. We have made definitive progress, but the next few years will continue to be as tough and demanding as ever. Your continued support in light of changes in strategic assumptions in our Grow the Army Plan, our Resetting of Army Forces, and our Modernization program are critical to helping our Army restore that balance and regain strategic flexibility and operational depth.

We see this outlined through four imperatives outlined by General Casey: sustain, prepare, reset, and transform.

A top priority for the Army and a reflection that this is not 'business as usual' is our continuing efforts to sustain the All Volunteer Force in an era of incredible volatility and global demand. Critical programs and initiatives that include Recruiting and Retention,

providing a quality of life for our Soldiers, their Families, and Army Civilians, offering world-class care for our Wounded Warriors in the 36 Warrior Transition Units and 9 Community-Based Warrior Transition Units; and attacking the roots of the rise in suicides, the trend lines in divorces, domestic violence, and sexual assaults, are directly tied to how we are sustaining the All Volunteer Force today and for the next generation.

The strategic context demands we continue to provide the best prepared Army for the Iraq and Afghanistan environments. As the Army grows and if demand is reduced, we will increase the time our Solders spend at home relative to their time deployed – what we call the Boots on the Ground (BOG)/Dwell ratio. This time will also allow the Army to shift from concentration on a Directed-Mission Essential Task List (D-METL), essential to the fights we are in today, to a Core-Mission Essential Task List (C-METL) focused on the Full Spectrum of offensive, defensive, and stability skills needed to dominate the entire spectrum of conflict.

To prepare we continue to rapidly incorporate the lessons learned from the current conflicts and anticipated threats into our training models, our programs, and our centers of excellence. Thanks, in large part to the tremendous support of the Congress, the Army remains the best-equipped Army in the world. We are determined to sustain this edge through initiatives such as the Rapid Equipping Force and the Rapid Fielding Initiative. We continue to scrutinize our processes of generating forces through use of the Army Force Generation Model which increases the readiness of the operating force through recurring periods of available trained and ready cohesive forces. We recognize that future Army readiness depends in large part on recognizing, leveraging, and cultivating a generation of Non-Commissioned Officers who capture the essence of the Army in striving constantly to perfect two primary responsibilities: mission accomplishment and taking care of our Soldiers.

The continuing demand for Army forces, the rotational nature of readiness, lessons we are learning from the current conflicts, and the anticipation of threats over the horizon, demand that we reset our Soldiers, units, and equipment. The accumulated toll of

almost eight years of combat operations reveals three broad components of Reset: reconstitution of equipment, reconstitution of soldiers, and reconstitution of units. We are prudently using our reset operations to upgrade and modernize our equipment to meet the current threat and future mission requirements. Resetting our Soldiers means creating the time for them to become reacquainted with their Families, catch up on needed professional schooling, or to train new skills. Our units reset under the Army Force Generation Model to synchronize the flow in and out of Soldier, equipment, and training to ensure they are at the highest level of personnel manning, equipment readiness, and training standards for the next mission whatever it may be.

We must continue to transform to meet the demands of the changing strategic environment and the needs of the combatant commanders. We continue to reorganize with over 84% of our units converted to modular formations. The publication of a new operational concept in the new Field Manual 3-0, *Full Spectrum Operations,* provides a relevant framework for how we approach the strategic operating environment and how we educate and train our leaders and Soldiers. It puts Stability operations on equal footing with Offensive and Defensive operations. We have complemented this new operating concept with an updated vision of how to train and develop Soldiers with the publication of our new Field Manual 7-0, *Training for Full Spectrum Operations.* Our Combat Training Centers have been retooled to train our formations within a 'full spectrum' environment, and we have invigorated the language and cultural skills needed to create advantage.

The immediate spin-outs and Army-wide proliferation of Future Combat Systems technology across the operational force is the core of our modernization effort. The transformation of the National Guard and Reserves to an operational reserve significantly enhances the already considerable value the Reserve Components provides to the Nation. The Grow the Army Initiatives, Base Realignment and Closure, and the Global Defense Posture Realignment represent the largest realignment of Army Forces since World War II. And we are doing this while fighting two wars with over 180,000 Soldiers consistently deployed around the world.

Finally, while we have accepted risk within the Generating Force to provide Soldiers to the Operating Force, we are beginning to make significant institutional changes to the processes and systems of the Generating Force to support the rotational readiness of our Forces on behalf of the Nation.

Three areas under the Four Imperatives that I consider *critical* to Readiness of the Army:

Modernization – As planned, all Army formations will have transformed to a Modular design by the end of 2013. The modernization level of the equipment contained within those modular designs is constantly being updated based on rates of procurement and the prioritization of distribution tied to operational demand for Army forces. In response to the uncertainty of threats within the irregular warfare environment, the Army has invested heavily in rapidly developed equipment and technologies to enhance Soldier survivability, lethality, and mobility.

The Future Combat Systems program, along with complementary programs, continues to be the center-piece of the Army's modernization effort. The accelerated spin-outs of newly developed technologies from the Future Combat Systems program into deployed or deploying combat formations is giving us the additional versatility we need for today's fights, and will create the transformational formations and capabilities we will need to meet tomorrow's full spectrum requirements. This will provide the Nation a Future Combat Systems enabled Army which can dominate across the spectrum of conflict.

Growth of the Army – The Army is grateful to the Congress for authorizing and resourcing the Growth of the Army. We will have completed this growth well ahead of schedule and are moving to train and efficiently distribute these Soldiers into our formations.

We are seeing incredible improvements in our ability to Recruit and Retain Soldiers. More and more applicants meet our enlistment standards without waivers, in part because of poor economic conditions, but alarmingly, only three out of ten applicants are even eligible for Military Service. It is important to recognize that the continued use of targeted Retention incentives help us keep great Soldiers and Families in the Army even after almost eight years of continuous conflict.

Full and Timely Funding – The FY10 President's Budget Submission has not been finalized and submitted to Congress, and it would be premature to discuss funding levels desired.

Within the FY09 funding streams, the Army today has sufficient funds to pay military personnel and to continue operations through June. We are nearing completion of the FY09 Supplemental request. The passage of the Supplemental by May 2009 will ensure efficiency of operations and guarantees a continuation of operations without disruption. A key component of the supplemental request is funding to reset Army equipment. In total FY09 dollars will fund the reset of 32 Brigades over FY09 and FY10, and over 80,000 items of equipment. Any delay in reset procurement funding will negatively impact the equipment readiness of the Army.

In closing, we must continue to invest in the centerpiece of our Army – the Soldiers and the Families that support them. For almost eight years our Soldiers have demonstrated incredible valor and resilience over the cumulative duration of this conflict, and the Congress has never failed to provide them tremendous support. Restoring balance between global demand and the supply of Army forces is directly tied to readiness and sets conditions for the future. Timely funding allows the Nation's Army to alleviate the stress we have placed on our Soldiers and their Families, reset and modernize our equipment, and expand our training across the spectrum of conflict to give the Nation the strategic depth it needs.

Thank you again for the opportunity to address the committee. Army Strong.

Mr. MURTHA. General Amos.

SUMMARY STATEMENT OF GENERAL AMOS

General AMOS. Sir, we have exactly the same system.

The C-ratings, of course, are a function of training and personnel and equipment. As we talked before the hearing, we ended up with people that are being pulled out of, and equipment being pulled out of, units back in the rear, moving forward. So all our forward deployed units, and I have got the numbers here, are—94 percent of our units that are forward deployed are what you would call C–1 or C–2.

But for that specific mission that they have overseas, we have in Afghanistan a couple of units that are not C–1 or C–2, and it is just simply a function of, they don't have enough manpower. A couple of battalion, logistics battalion in Afghanistan, it is not C–1 and C–2, but we are fleshing that out with the advent of the forces or the influx of the forces coming up.

But what you really have is, you have the sorts of this C-rating which is the design mission of that unit. And we have, for instance, two artillery battalions right now in Iraq, one doing civil/military ops, the other doing security force operations securing the bases, and they are not doing anything with regard to artillery. They are C–1 and C–2 for the mission assigned in Iraq, but they are C–3 and C–4 for their assigned mission, which is their constant, everyday wartime mission.

So we have the same situation, Mr. Chairman.

[The statement of General Amos follows:]

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House Appropriations Committee
Subcommittee on Defense

STATEMENT OF

GENERAL JAMES F. AMOS
ASSISTANT COMMANDANT OF THE MARINE CORPS

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE

SUBCOMMITTEE ON DEFENSE
(USMC READINESS)

11 MARCH 2009

Not public until
Released by the House Appropriations Committee
Subcommittee on Defense

General James F. Amos
Assistant Commandant of the Marine Corps

General James F. Amos, USMC, is the 31st and current Assistant Commandant of the Marine Corps. A Naval aviator by trade, General Amos has held command at all levels from Lieutenant Colonel to Lieutenant General. Most notably he commanded the 3rd Marine Aircraft Wing in combat during Operations Iraqi Freedom I and II from 2002-2004, followed by command of the II Marine Expeditionary Force from 2004-2006. He subsequently served as the Commanding General, Marine Corps Combat Development Command and as the Deputy Commandant, Combat Development and Integration from 2006 to July 2008. General Amos was promoted to his present rank and assumed the duties of Assistant Commandant of the Marine Corps on 2 July 2008.

Operational assignments include tours with Marine Fighter Attack Squadrons 212, 235, 232 and 122 where he flew the F-4 Phantom II. In 1985 General Amos assumed command of Marine Wing Support Squadron 173. Later, transitioning to the F/A-18 Hornet, he assumed command of Marine Fighter Attack Squadron 312 and subsequently joined Carrier Air Wing Eight onboard USS Theodore Roosevelt (CVN-71). General Amos took command of Marine Aircraft Group 31 Beaufort, SC in May 1996.

General Amos' staff assignments include tours with Marine Aircraft Groups 15 and 31, the III Marine Amphibious Force, Training Squadron Seven, The Basic School, and with the MAGTF Staff Training Program. Promoted to Brigadier General in 1998 he was assigned to NATO as Deputy Commander, Naval Striking Forces, Southern Europe, Naples Italy. During this tour he commanded NATO's Kosovo Verification Center, and later served as Chief of Staff, U.S. Joint Task Force Noble Anvil during the air campaign over Serbia. Transferred in 2000 to the Pentagon, he was assigned as Assistant Deputy Commandant for Aviation. Reassigned in December 2001, General Amos served as the Assistant Deputy Commandant for Plans, Policies and Operations Department, Headquarters, Marine Corps.

Introduction

Chairman Murtha, Congressman Young, and distinguished members of the Subcommittee, on behalf of your Marine Corps, I want to thank you for your generous support and for the opportunity to speak to you today about the readiness of the United States Marines. Recently, the Secretary of Defense outlined a strategy to return the Department to a balanced force capable of prevailing in current conflicts while preparing for other contingencies.[1] Consistent with Secretary Gates' strategy, my statement will address our efforts to achieve that balance, the readiness challenges facing Marines today, and the critical steps needed to reset and reconstitute our Corps for today's complex challenges and tomorrow's uncertain security environment.

Despite high operational tempo, your Marines are resilient, motivated, and performing superbly in missions around the globe. They are fully engaged and winning in combat operations in Iraq and Afghanistan as part of a generational struggle against global extremism. This sustained effort and performance does not come without costs – to the institution, to our equipment, to our strategic programs, and most importantly to our Marines and their families. Continued Congressional investment in our Marines and families, resetting and modernizing our equipment, and training Marine Air Ground Task Forces for the future security environment are critical to the Marine Corps' success as the "Nation's Force-in-Readiness."

Readiness Assessment

The Marine Corps is meeting all OPERATION IRAQI FREEDOM (OIF) and OPERATION ENDURING FREEDOM (OEF) requirements. In the course of the last seven years, your Marine Corps has been battle-tested, combat hardened, and has accumulated tremendous experience in irregular warfare and counter-insurgency operations. Forward deployed units are manned, trained, and equipped to accomplish their assigned missions, and 99% of deployed Marine Corps units report the highest levels of readiness for those missions. However, resources are limited and non-deployed units incur the costs of ensuring deployed and next-to-deploy units have sufficient personnel, equipment, and training. As a result, 60% of our non-deployed forces are reporting degraded readiness levels. This degraded state of readiness

[1] Gates, Robert M. "A Balanced Strategy: Reprogramming the Pentagon for a New Age." Foreign Affairs, Volume 88, No. 1, January / February 2009.

within our non-deployed forces presents risk in our ability to rapidly respond to other unexpected contingencies.

Because our equipment, personnel, and training priorities are focused on counter-insurgency operations, we have experienced degradation in some of our traditional, full spectrum, core competencies such as integrated combined arms operations, and large-scale amphibious operations. These skills are critical to maintaining the Marine Corps' primacy in forcible entry operations that enable follow-on joint forces. The OIF/OEF demand for units has also limited our ability to fully meet Combatant Commander requests for theater engagement activities. The current security environment has clearly justified the tradeoffs we've made to support the Long War, but the uncertainty of the future makes it prudent to regain our capabilities to operate across the full range of military operations – to be that "balanced force" that Secretary Gates speaks of.

In addressing the challenges facing the Marine Corps, I have structured my statement along the lines of our key readiness concerns – personnel and military construction, equipment, training, amphibious shipbuilding, and caring for our warriors and their families. I will discuss the positive steps and proactive initiatives we are undertaking, with your support, to reset, modernize, and reconstitute the Marine Corps for an uncertain future. Finally, I will conclude with some of our ongoing initiatives and programs that address the care and welfare of our Marines and their families.

Stress on the Force: Personnel Challenges and Operations Tempo

The pace of operations for your Marines remains high, with over 31,000 Marines forward-deployed across the globe. In the U.S. Central Command area of operations, there are 26,000 Marines deployed in support of OPERATION IRAQI FREEDOM and OPERATION ENDURING FREEDOM. Despite the recently concluded Status of Forces Agreement with Iraq and the plans for a drawdown of forces there, the demand and associated operational tempo for Marines will remain high as we transition requested forces to Afghanistan. Meeting this global demand has resulted in short deployment-to-dwell ratios for many units, with some deployed for as many months as they spend at home. Some of our low density/high demand units such as Intelligence, Explosive Ordnance Disposal, and certain aviation units, remain at or below a 1:1 dwell, with only moderate relief in sight for the near future. Insufficient dwell negatively

impacts our total force readiness – because it leaves inadequate time to conduct full spectrum training and reconnect with families.

Another readiness detractor has been the need to task combat arms units, such as artillery, air defense, and mechanized maneuver to perform "in-lieu-of" (ILO) missions such as security, civil affairs and military policing. Shortages of those skill sets created the need for ILO missions to meet the requirements for counter-insurgency operations in Iraq and Afghanistan. Although these mission assignments are necessary, they have degraded our readiness because these combat units' are unable to train to and maintain proficiency in their primary skill sets.

In addition to unit rotations, and ILO missions, the Marine Corps is tasked to fill a variety of assignments for forward-deployed staffs, training teams, and joint/coalition assignments that exceed our normal manning structures. The manning requirements for these Individual Augments (IAs), Training Teams (TTs) and Joint Manning Documents (JMDs) seek seasoned officers and staff non-commissioned officers because of their leadership, experience, and training. We understand that these augmentees and staff personnel are critical to success in Iraq and Afghanistan, but their extended absence has degraded home station readiness, full spectrum training, and unit cohesion.

Personnel Initiatives. In order to better meet the needs of a nation at war, the Corps has been authorized to grow to an active duty end strength of 202,000 (202K) Marines. This increase in manpower will ultimately result in a Marine Corps with three balanced Marine Expeditionary Forces (MEFs) and will help mitigate many of the operational tempo challenges described in the previous section. A balanced Marine Corps will provide combatant commanders with fully manned, trained, and equipped Marine Air Ground Task Forces (MAGTFs) that are multi-capable, responsive, and expeditionary. Additionally, the end strength growth will increase our capacity to deploy forces in response to contingencies and to participate in exercises and operations with our international partners in support of the Nation's broader security objectives. It will also allow more time at home for our Marines to be with their families, to recover from long deployments, regain proficiency in core skills, and prepare for their next mission.

The 202K growth plan is progressing well. The Marine Corps grew by over 12,000 Marines in Fiscal Year 2008 and is on pace to reach an active duty end strength of 202K by the end of Fiscal Year 2009 – two years ahead of schedule. Thanks to the continued support of Congress, we have increased our infantry, reconnaissance, intelligence, combat engineer,

unmanned aerial vehicle, military police, civil affairs, and explosives ordnance disposal communities. Several of these units have already deployed to Iraq, mitigating the need for additional ILO missions. We have realized improvements in dwell time for a number of stressed communities. Although the plan is progressing well, the growth in end strength will not result in an immediate improvement in reported readiness because it takes time to train and mature our newly recruited Marines and units.

In addition to our end strength increase, the Marine Corps is examining other options to keep Marines in the fight. For example, we are hiring over 1,700 civilian police officers and security support personnel to meet home station policing and security requirements at our bases and stations. After our first year of implementing this program, we are successfully blending traditional military police with federal civilian police officers at the majority of our installations. This initiative enables us to free active duty military police for deployments in support of the MAGTF, reducing the need for ILO assignments.

Military Construction.

As the Marine Corps grows to 202K, military construction is critical to supporting and sustaining the new force structure and maintaining the individual readiness and quality of life for our Marines. Thanks to your support, we recently expanded our construction efforts and established a program that will provide adequate bachelor housing for our entire force by 2014. In Fiscal Year 2009 alone, Congress funded over 12,000 barracks spaces for our Marines. Congressional support is still required to provide additional new barracks spaces to meet our 2014 goal. Concurrent with our new construction efforts is our commitment for the repair and maintenance of existing barracks to improve morale and quality of life.

Equipment Readiness

Ensuring that our Marines are equipped with the most modern and reliable combat gear is a necessity. However, the requirement to fully resource deployed forces, often in excess of our tables of equipment, has reduced the availability of materiel essential to outfit and train our non-deployed units. Approximately 27% of all Marine Corps ground equipment and 40% of our active duty aviation squadrons are deployed overseas. Most of this equipment is not rotating out

of theater at the conclusion of each force rotation; it remains in combat, to be used by the relieving unit.

Ground Equipment Readiness. After seven years of sustained combat operations, our deployed equipment has been subject to more than a lifetime's worth of wear and tear, harsh environmental conditions, and increased operating hours and mileage. Additionally, the weight associated with armor plating further increases the wear on our deployed vehicle fleet and accelerates the need for repair and replacement of these assets. Despite these challenges and higher utilization on already aging equipment, our young Marines are keeping this equipment mission-ready every single day. The high equipment maintenance readiness rates throughout the Marine Corps are a testament to their dedication and hard work.

The policy to retain equipment in theater as forces rotate in and out was accompanied by increased in-theater maintenance presence; this infusion of maintenance support has paid great dividends, with deployed ground equipment maintenance readiness above 90%. However, the Marine Corps is experiencing challenges with the supply availability of a number of critical equipment items. Equipment supply availability varies depending on whether units are forward deployed or in dwell at home station. Supply readiness rates have decreased for home station units, while we work to meet the demand of deployed forces, and those next-to-deploy. Shortages of critical equipment limit home station unit's ability to prepare and train to their full core competencies and present additional risk in availability of equipment necessary to respond swiftly to unexpected contingencies.

Ground equipment age continues to be a top readiness challenge as well. As equipment ages, more time, money, and effort are expended repairing it. Ultimately, the answer to achieving sustained improvements in ground-equipment readiness is to improve logistics processes and to modernize with highly reliable and maintainable equipment. The Corps is achieving efficiencies by improving supply-chain processes, adopting best practices, and by leveraging proven technological advances to facilitate responsive and reliable support to the Operating Forces.

Aviation Equipment. Our aviation capability is a critical part of the MAGTF. Just like our ground forces, deployed Marine aviation units receive the priority for aircraft, repair parts, and mission essential subsystems such as forward looking infrared (FLIR) pods. Non-deployed forces, on the other hand, face significant challenges for available airframes and supply parts. Exacerbating the readiness challenges in our aviation fleet, most Marine aviation platforms are

"legacy" platforms which are no longer in production, placing an even greater strain on our logistics chain and maintenance systems.

Our Marine Corps aviation platforms are supporting ground forces in some of the world's harshest environments: the deserts of Iraq, Afghanistan, and the Horn of Africa. Our aircraft are flying at utilization rates far beyond those for which they were designed. We are nearly tripling the utilization rates of our workhorses - the F/A-18C and D; the KC-130 cargo and aerial refueling platform; our EA-6B electronic warfare aircraft; and even the new MV-22 Osprey. Increased utilization causes aircraft to structurally age faster than programmed. As our legacy aircraft are lost or damaged in combat, the Marine Corps is faced with a shortage of available aircraft for training and future employment. To maintain sufficient numbers of aircraft in deployed squadrons, non-deployed squadrons have taken cuts in aircraft and parts. With our current force structure, our aircraft requirement, termed Primary Aircraft Authorization (PAA) is short 248 aircraft across all Type/Model/Series. These shortfalls include all modifications, intermediate maintenance events, depot maintenance, transition/procurement aircraft, and aircraft damaged beyond repair.

Maintaining the readiness of aviation assets while training aircrew is an enormous effort and an ongoing readiness challenge. Our aviation Fleet Readiness Centers have been able to mitigate degradation of our aircraft materiel readiness through modifications, proactive inspections, and additional maintenance actions. These efforts successfully bolstered aircraft reliability, sustainability, and survivability. Nevertheless, additional requirements for depot-level maintenance on airframes, engines, weapons, and support equipment will continue well beyond the conclusion of hostilities. Aircraft undergoing depot-level repairs are not available for training or combat. We are simply running short of aircraft on our flight lines due to age, attrition, and wartime losses.

Pre-positioning Equipment and Stores. Marine Corps Prepositioning Programs are comprised of the Maritime Prepositioning Force (MPF), with three Maritime Prepositioning Ships Squadrons (MPSRONs), and the Marine Corps Prepositioning Program – Norway (MCPP-N). Since 2002, we have drawn equipment from our strategic programs and stocks to support combat operations, growth of the Marine Corps, and other operational priorities. While the readiness of the strategic prepositioning programs continues to improve, equipment shortages in our strategic equipment pre-positioned stores have forced the Marine Corps to accept necessary

risk in our ability to rapidly respond to world-wide contingency operations. With Congress' support, our end item shortfalls in the MPF and MCCP-N programs will be reset, in accordance with operational priorities, as equipment becomes available.

In-Stores Equipment. In-Stores Equipment refers to our pool of assets that serve as a source of equipment to replace damaged or destroyed equipment in the operating forces, and potentially fill shortfalls in the Active and Reserve Components. In-Stores equipment has been used heavily and leveraged to source increased equipment requirements in Iraq and will be used to support our transition to operations in Afghanistan. The supply rating or attainment level for In-Stores assets is degraded and listed at 31% availability. Such low levels of equipment within our in-stores equipment pools limits our ability to rapidly respond to unexpected contingencies and to replace damaged equipment in the operating forces.

Equipment Initiatives. To counter the readiness impact of damaged, destroyed or worn out equipment, the Marine Corps initiated a program to reset and modernize our force. The goals of our reset program are: first, to sustain the current fight by repairing or replacing worn out or damaged/destroyed equipment while enhancing our support to the warfighter by modernizing our force with newer, more capable, equipment. Secondly, reset will increase non-deployed unit readiness by enhancing home station equipment pools and pre-deployment unit training requirements.

Equipment Reset. Reset consists of actions taken to restore units to a desired level of combat capability commensurate with the unit's mission. It encompasses maintenance and supply activities that restore and enhance combat capability to equipment that has been damaged, rendered obsolete, or worn out beyond economic repair due to combat operations by repairing, rebuilding, or procuring replacement equipment. Our cost estimate for resetting our force is over $20 Billion. As we continue our fight, we will update this estimate. We appreciate the generous support of the Congress in appropriating over $12 Billion so far to ensure that Marines have the equipment and maintenance resources they need. We are committed to managing these resources wisely as we repair, reset and modernize our force.

We expect to see increases in reset requirements caused by the return of equipment associated with force reductions in Iraq and by the requirement to transfer equipment into Afghanistan to sustain deployed readiness there. As the Marine Corps redeploys equipment from theater, we conduct thorough inspections to determine appropriate reset actions.

Equipment that can be repaired and maintained is returned to home stations, where a mix of government and contracted workers, conduct maintenance before the equipment is re-issued to the operating forces. Equipment requiring depot repair actions is shipped to various DoD depots, or receives contracted maintenance. Equipment determined to be not economically repairable will be disposed of and replacements procured.

Modernization. As the Nation's expeditionary force-in-readiness, the Marine Corps is required to prepare for the unexpected. We are making progress in repairing and resetting existing equipment, but this effort must be augmented with continued investment to modernize our capabilities. Equipment modernization plans are a high priority within our Corps. Our Commandant's recently published Marine Corps Vision and Strategy 2025 will help guide our modernization efforts as we continue to be the agile and expeditionary force for the nation.

Ground Modernization. Prompted by a changing security environment and hard lessons learned from sevens years of combat, the Marine Corps recently completed an initial review of its Operating Force's ground equipment requirements. Recognizing that our unit Tables of Equipment (T/E) did not reflect the challenges and realities of the 21st century disbursed battlefield, the Corps adopted new T/Es for our operating units. This review was synchronized with our modernization plans and programs, and provides enhanced mobility, lethality, sustainment, and command and control across the MAGTF. The new equipment requirements reflect the capabilities necessary not only for the Corps' current mission, but for its future employment across the range of military operations, against a variety of threats, and in diverse terrain and conditions. The MAGTF T/E review will serve as a link with the critical work being done to reset, reconstitute and revitalize the Marine Corps.

Aviation Modernization. We are modernizing the aircraft we fly; changing the way we think about aviation support to our ground forces; and changing our capabilities to conduct operations in any clime and place. To help meet the growing intelligence, surveillance, and reconnaissance requirements of our operating forces, the Marine Corps will field three levels, or "tiers," of unmanned aircraft systems (UAS). Furthermore, we are committed to an "in-stride transition" from twelve type/model/series aircraft to six new aircraft. Programs such as the F-35B Joint Strike Fighter, the MV-22 Osprey, the CH-53K, and the H-1 upgrades will vastly increase the Corps' aviation capability and ensure our warfighting advantage for decades to

come. It is critical that these programs stay on track, and on timeline with full funding support, due to the declining service life of our legacy tactical aviation platforms.

Training Marines to Fight

In preparing Marines to fight in "any clime and place," the perennial challenge to our Corps is to attain the proper balance between core warfighting capabilities and those unique to current operations. Decreased unit dwell times and shortages of equipment in our non-deployed forces translate to a limited ability to conduct training on tasks critical to our core competencies, such as integrated combined arms, large force maneuver, and amphibious operations. Short dwell times between deployments and the need for many units to perform "in lieu of missions" have resulted in a singular focus on counter-insurgency training. Our Marines continue to be well trained for current operations through a challenging pre-deployment training program that prepares them for all aspects of irregular warfare.

Pre-deployment Training Program. In order to properly train our operating forces for the rigors and challenges they face in OIF and OEF, we have developed a very demanding, realistic and adaptive pre-deployment training program. The Pre-deployment Training Program (PTP) contains standards-based, progressive skills training which is evaluated by commanders and assessed by our Training and Education Command at the final Mission Rehearsal Exercise. The PTP includes counter-insurgency combat skills, as well as operational language and culture skills. Unit after-action reports and unit surveys conducted by the Marine Corps Center for Lessons Learned (MCCLL) are shared Corps-wide and have influenced training changes to keep PTP relevant. For example, the Afghanistan Pre-Deployment Training Program, while similar in many facets to the PTP for Iraq, includes an emphasis on both mountain warfare and the integration of MAGTF combined arms.

During Fiscal Years 2007 and 2008, the Pre-deployment Training Program resulted in over 42,000 Marines receiving theater-specific combined arms and urban operations training at Exercise Mojave Viper at Twenty-nine Palms, California. Over 2,800 Marines received mountain operations training at the Mountain Warfare Training Center in Bridgeport, California. And over 12,000 Marines participated in the aviation-focused Desert Talon Exercise in Yuma, Arizona.

While our PTP focuses on preparing Marine units for their next deployment, we are further enhancing our education and training programs to respond to ongoing changes in the security environment. Through the efforts of organizations such as the Marine Aviation Weapons and Tactics Squadron One, Marine Corps Tactics and Operations Group, the Center for Advanced Operational Culture Learning, the Advisor Training Group, and the Marine Corps University, we are providing a holistic education to our Marines across the range of military operations. Based on a continuous lessons learned feedback process, supported by the Marine Corps Center for Lessons Learned (MCCLL), we are building an Enhanced Company Operations capability which will make our smaller infantry units more lethal, agile, and survivable.

Preparing for Future Conflict. As challenging as it is to prepare Marines for the current fight, our forces must adapt to the ever-changing character and conduct of warfare to remain relevant. To meet the complex challenges in the emerging security environment, we are improving training and education for the fog, friction and uncertainty of the 21st century battlefield. We are focusing efforts on our small unit leaders—the "strategic non-commissioned officers" and junior officers—who will operate more frequently in a decentralized manner and assume greater responsibility in operations against hybrid threats.

To better prepare our Marine Air Ground Task Force for operating across the range of military operations, we are developing an improved training and exercise program. When implemented, this program will increase our ability to maintain proficiency in core warfighting capabilities, such as combined arms maneuver and amphibious operations, while continuing to meet current commitments. Two training initiatives are of critical importance. The Combined Arms Exercise - Next (CAX-Next), and the Marine Air Ground Task Force Large Scale Exercise (MAGTF-LSE). The CAX-Next is a live-fire training exercise aimed at developing combined arms maneuver capabilities from individual Marine to regimental-sized units. It will incorporate lessons learned from today's conflicts, while training adaptable and flexible MAGTFs for the future. The MAGTF-LSE is a scenario-based, service-level training exercise, scalable from Marine Expeditionary Brigade to Marine Expeditionary Force levels. It will develop the Marine Air Ground Task Force's capability to conduct amphibious power projection and sustained operations ashore in a combined, joint, whole-of-government environment.

Amphibious Shipbuilding

The Chief of Naval Operations and Commandant of the Marine Corps have determined that the force structure requirement to support a 2.0 Marine Expeditionary Brigade lift is 38 total amphibious assault ships. Due to fiscal constraints, the Department of the Navy has agreed to maintain a minimum of 33 total amphibious ships in the assault echelon. The 33 ship force accepts risk in the arrival of combat support and combat service support elements of the Marine Expeditionary Brigade. Of that 33 ship Battle Force, 11 aviation-capable big deck ships (LHA/LHD) and 11 LPD class ships are required to accommodate the Marine Expeditionary Brigade's aviation combat element and part of the ground combat element.

Caring for our Warriors and Families

A critical part of our overall readiness is maintaining our solemn responsibility to take care of our Marines and their families. While Marines never waiver in the ideals of service to Corps and Country, the needs of our Marines and their families are constantly evolving. Marines have reasonable expectations regarding housing, schools, and family support. It is incumbent upon us, with the generous support of Congress, to support them in these key areas. Marines make an enduring commitment to the Corps when they earn the title Marine. The Corps in turn, makes an enduring commitment to every Marine and his or her family.

Putting Family Readiness on a Wartime Footing. Last year, the Marine Corps initiated a multi-year plan of action to place family support programs on a wartime footing. We significantly increased training and support staff at the installation level, expanded the depth and breadth of family readiness training programs, and authorized full-time Family Readiness Officers in more than 400 units. We improved the command's ability to communicate with Marines and their families with state-of-the-art information technology tools. We continue to assess the efficacy of our Marine Corps Community Services programs to ensure that we are empowering our Marines and their families to maintain a state of readiness while caring for their immediate needs.

These initiatives and others demonstrate the commitment of the Marine Corps to our families and highlight the connection between family readiness and mission readiness. We are grateful to Congress for providing supplemental funding during Fiscal Years 2008 and 2009 that enabled the initial start-up of our improved family readiness program.

Improving Care for Our Wounded Warriors. The Marine Corps is very proud of the positive and meaningful accomplishments of the Wounded Warrior Regiment in providing recovery and transition support to our wounded, ill, and injured Marines and Sailors and their families. Since the Regiment stood up in April 2007, we instituted a comprehensive and integrated approach to wounded warrior care, and unified it under one command. Our single process provides active duty, reserve, and separated Marines with non-medical case management, benefit information and assistance, resources and referrals, and transition support. The Regiment strives to ensure programs and processes adequately meet or exceed the needs of our wounded and injured Marines, while remaining flexible to preclude a "one-size-fits-all" approach to care. To ensure effective family advocacy, we added Family Readiness Officers at the Regiment and to its two battalions.

While the Marine Corps is aggressively attacking the stigma and lack of information that prevent Marines from asking for help, we are also being proactive in reaching out to those Marines and Marine veterans who may need assistance. Our Wounded Warrior Call Center not only receives calls from active duty and veteran Marines, but also initiates important outreach calls. Since November 2007, our call center has made over 38,000 calls and contacted over 8,800 Marines and family members.

Our Job Transition Cell, manned by Marines and representatives of the Departments of Labor and Veterans Affairs, has proactively reached out to identify and coordinate with employers and job training programs to help our Wounded Warriors obtain positions where they are likely to succeed and enjoy promising careers. One example is our collaboration with the United States House of Representatives to establish a Wounded Warrior Fellowship Program to facilitate hiring disabled veterans to work in Congressional offices.

The Marine Corps' commitment to our combat wounded, ill, and injured is steadfast; we are grateful for the support and leadership of Congress on their behalf. I would also like to extend my personal thanks for Congressional visits to our Marines and Sailors in the hospitals where they are being treated and convalescing.

Conclusion

This Nation has high expectations of her Corps—and Marines know that. Your Marines are answering the call around the globe while performing with distinction in the face of great

danger and hardships. The Corps provides the Nation unrivaled speed, agility, and flexibility for deterring war and responding to crises; our ability to seize the initiative and dominate our adversaries across the range of military operations requires the right people, the right equipment, and sufficient time to train and prepare appropriately.

As your Marines continue to serve in combat, we must provide them all the resources required to complete the tasks we have given them. Now more than ever they need the sustained support of the American people and the Congress to maintain our readiness, reset the force during an extended war, modernize to face the challenges of the future, and fulfill our commitment to Marines, Sailors, and their families.

On behalf of your Marines, I extend great appreciation for your faithful support to date and thank you in advance for your ongoing efforts to support our brave warriors. The Corps understands the value of each dollar provided by the American taxpayer, and will continue to provide maximum return for every dollar spent. Today over 200,000 Active and 39,000 Reserve Force Marines remain ready, relevant, and capable as the "Nation's Force-in-Readiness"… and with your help, we will stay that way.

REMARKS OF MR. MURTHA

Mr. MURTHA. Well, we want to help you. When Bill Young was the chairman we put a lot of money—and how much did we put in there, Bill? We put $40 billion or $50 billion in—do you remember—for reset and so forth over the last few years.

But we need some help. You get all kinds of rumors, which systems are the most important. But we need you to tell us so we can negotiate with the Defense Department about what we need to do.

And we are going to have a supplemental here; we don't have the exact schedule, but it has to be done before May or June, or the Army will have a real difficult time. We want to make sure we do the right thing in the supplemental in order to increase readiness not only for the core mission or not only for the mission that you have in Afghanistan and Iraq, but also for the core mission, which is some contingency that happens down the road.

But I appreciate what you are going through. And we talked before this hearing started. I have a great concern about getting back to where we should be with the forces, and you need to give us a little bit of an idea.

What I would suggest you do—and I suggested this before the meeting started—you need to go out and look at what I have just looked at. You need to talk to the troops in the field and see what they say. You need to hear about this equipment and so forth, not just telling me that, Well, everybody says the same thing; they complain a lot.

We know that. I have heard it before. I heard it in 1974 and 1975, and we got rid of thousands and thousands of people. It was an indication that there was a problem.

I am saying, there is an indication that there is a problem right now, and we need to look at it. Whether it is inadequate recruiting, whether it is people being recruited, whether there are too many waivers, I don't know what the hell it is.

But we want to help you, and we can't help you if you don't really give us the details of what you suggest we need to do.

Mr. Young.

RESET ISSUES

Mr. YOUNG. Mr. Chairman, I don't have any further opening statement, but I do have some questions. I would like to get into the issue of reset.

This committee has dealt with reset issues quickly and effectively once we were made aware of the need, and I would like to hear from you what the reset requirements are today and what you expect they might be in the future.

Also, I have a concern about what equipment—when we leave Iraq, what equipment will we bring back from Iraq, if any? Will we be sending any of that equipment to Afghanistan or just what happens there? And what kind of a reset issue will we be considering for you when all this happens?

General CHIARELLI. I can't give you a dollar figure on reset because, as you know, we are in the middle of putting together the budget—or other people are putting together the budget. And I am

in a position right now, I can tell you, that we are going to need to reset. And reset is absolutely critical.

The problem we are having today is the amount of time we have back home to both reset equipment and reset personnel. As I was explaining to the chairman earlier this afternoon, we are currently 1 year deployed, 1.3 years back at home. We are just over 1 year, almost a 1-to-1, with some units 1.3 being the average. So that puts a pressure on not only resetting people, but resetting equipment.

We are moving a lot of our theater-provided equipment from Iraq into sets that are available for forces going into Afghanistan. As you know, our numbers aren't as great in Afghanistan today, nor will they be based on current plans, than they are in Iraq right now. But we are freeing up some sets and beginning to set the theater for additional Army forces that are flowing into Afghanistan. So some of that theater-provided equipment will move over to Afghanistan.

AFGHANISTAN

Mr. YOUNG. So what about Marine Corps equipment, bringing back home or sending to Afghanistan?

General AMOS. Sir, right now we have got a little over 45,000, what we call principal end items in Iraq. And our schedule for drawing down in Iraq is over the next 12 months. There is an effort—we just stood up kind of a blue ribbon team in to join the staff in Iraq, in the Anbar Province for General Tryon, to help him develop the plan for the retrograde over the next 12 months. So we are going to have to start pulling some of that equipment out.

We are at eight or nine battalions of Marines 3 or 4 years ago. By May, we will be down to three infantry battalions, an LAR battalion and a security battalion. So a lot of that equipment is still in Iraq. There is a natural reluctance by the commanders on the ground to say, "Well, I just might need that, you know." I don't want to be the commander that says, you know, I sent it home and now I need it.

But those are days that have gone; the commander on the ground now understands that. So we are retrograding that stuff out over the next 12 months.

There is going to be—I asked the question, "How much of that is going to find its way over to Afghanistan?" And roughly 15 percent—excuse me, roughly 13 percent of the equipment in Iraq right now is going to migrate over to Afghanistan. And this is stuff that is quality. I don't want you to think we are taking it from the junkyard in Iraq and we are going to send it to Afghanistan; this is stuff in what we would call class A condition. In other words, it is ready to go.

Some of it is what we would call forward in stores equipment, equipment that has been sitting there. So an up-armored Humvee or an MRAP, in case one gets blown up, now I don't have to order one, I just pull it off the lot. That is the kind of stuff that is going to find its way into Afghanistan.

So we have got a plan to get the stuff out of Iraq over the next 12 months. And that is going to be very difficult because we are all going to be in competition for the same highways, the same

heavy equipment transport, the same airports, the same ship berths down at Kuwait, the same wash-down racks. So all this like a great ballet.

We are going have to start getting that stuff out. We have a plan, we are marching towards it, and then we are going to take a piece of that stuff right now, and it is moving into Afghanistan.

Mr. YOUNG. Thank you.

CONTRACTORS

Mr. MURTHA. I asked President Obama the other day, I said, you have 150,000 contractors in Iraq, 274,000 in the theater in CENTCOM. He was surprised at that.

He said, turning to the Secretary of Defense or the Chief of the Joint Chiefs, he said, How are we getting them out? Can you tell me how you are getting those contractors out? Are they coming out at the same speed the troops are coming out.

Mr. MORAN. Is that a question to the Generals?

Mr. MURTHA. Yes.

General CHIARELLI. Intuitively, I would say, yes, sir. I have not checked on those numbers. The last I looked, when you took the whole contractor population, we have 1.1 contractor for every soldier currently in Iraq and Afghanistan today.

I think you are going to find far fewer contractors in Afghanistan than you do in Iraq, albeit we are still relying on contractors to do much of our maintenance. And part of the reason we have been able to keep equipment reliability in theater so high—we have seen the highest numbers we have seen in the Army in a long time, over 90 percent on track and wheel vehicles and over 75 percent on aviation aircraft—is because of those contractors and because we are rebuilding and resetting some of that equipment right in theater.

Mr. MURTHA. It costs $44,000 more, on average, for a contractor than it does for a direct hire. We need a schedule. Somebody needs to give us a schedule of how we are bringing the contractors out as we are bringing the troops out. If we bring out another 20,000 troops and you leave 25,000 contractors there, we haven't made much progress. So we need, this committee needs to see what you are leaving there and how you are bringing them out.

General CHIARELLI. I owe you that, Mr. Chairman.

[The information follows:]

The Department of Defense, U.S. Central Command, and to a lesser extent the Department of the Army, continually assess the Iraqi personnel requirement to ensure the appropriate personnel strength to accomplish the mission. Logistics planning is in full swing to weigh the requirements for contracted support during redeployment, considering declining troop strength as well as increased need for some services, for example transportation, base closure and remediation support, and property management. The timeline for contractor redeployment may not mirror that of the Warfighters and may not be proportional. Additionally, as troop numbers grow in Afghanistan, some contractors may shift rather than redeploy. Redeployment timelines for combat forces and contractors are not discussed in non-secure forums due to operational security.

Mr. MURTHA. Mr. Dicks.

TRAINING

Mr. DICKS. Thank you, Mr. Chairman.

As I understand it, because the Army is rotating so fast going back into Iraq, that will change somewhat now. That is why—they are only training, as I understand it, for a counterinsurgency mission.

Is anybody training for anything other than that?

General CHIARELLI. At lower levels, they are, sir. But I think you are exactly correct in indicating when you have got only one——

Mr. DICKS. One year.

General CHIARELLI. One year or a little bit more than one year at home, you are focusing after your reset period almost totally on that deployment mission. Now, I think General Petraeus and General Liarno would argue that we have not lost the ability to synchronize kinetic effects on the battlefield; and we do that every single day for shorter periods of time than you would see if we were training for our core mission, but we still have the ability to do that. So sometimes I think we may overstate the degradation in those capabilities, but they are definitely degraded.

Mr. DICKS. But we would definitely have the most combat trained force, probably, in American history. I mean, more people have been in combat, both Guard and Reserve and active forces than in any other time, I would think.

General CHIARELLI. There has never been a more battle-tested force than you have today; that is correct, sir.

READINESS RATINGS

Mr. DICKS. Now, tell me about these D ratings which would measure readiness against a directed mission. We understand that this is something the Army is going to do and it is going to do rather soon.

General CHIARELLI. We begin in May. We are going to get rid of what you used to see was a PCTEF rating. A PCTEF rating went from 1 to 4. You would be PCTEF–4 prepared for the next mission, but you didn't even know why. It just said PCTEF–4.

Not only will we provide a D-rating, and that is going to be the rating, the readiness rating, for the mission you are about to deploy on; but we are going to require commanders to tell us, what is. your rating in personnel, what is your rating in training, what is your rating in equipment, so that you can see how they are doing in those three critical areas and really have an opportunity to judge their readiness.

Commanders will not have the ability to subjectively upgrade those individual ratings. They will have the ability to subjectively upgrade the overall rating on D, but you will be able to see what the actual ratings are and can judge where they are in those three critical areas.

Mr. DICKS. On December 1——

Mr. MURTHA. Let me——

Mr. DICKS. I yield to the chairman.

Mr. MURTHA. Let me just say, we don't want you to hide from us the real readiness capability of the Army. I hope that is not what you are trying to do. We need to know if there is a problem, so we can fix it.

I mean, I hear what you are saying, but I get very nervous when you are going to come up with a rating other than an overall rat-

ing. You explained the difference, but I hope you don't send over here and start to degrade the C-ratings.

General CHIARELLI. That will not happen.

Mr. MURTHA. All right.

Mr. DICKS. It would be good, though, that we could assess, I think, the readiness to do the mission that they are going to be having to do. I think that—I think the more information we have, the better off we are. Just, that is my impression.

Let me also ask you about this. On December 1, 2008, the Deputy Secretary of Defense issued guidance elevating the importance of irregular warfare to be strategically important as traditional warfare.

Can you tell us what the Army is doing in this core? What does this mean or what does it mean for the future?

General CHIARELLI. Well, sir, I could give you all kinds of examples. I think that both General Amos and myself would say that I think we are proud of both of our services' ability to adapt to this new kind of warfare, the kind of warfare that I believe is going to dominate our future.

I will tell you, if you look at how we have restructured our force—I think you know we have gone to a modular force. We have gone to a readiness system that is based on the Army force generation model, which basically says, every unit goes from deployment to a reset period of 180 days, then, as long as we can, in a train-and-ready phase that gets ready for that next deployment. We hope it can be longer than 6 months, sometimes it is 8 months, sometimes it is 9 months right now. We would like to get it out to a year and a half or even greater. And then it goes into a deployment. That is what we have been able do with a modular force.

When it comes to force structure, besides modulizing the force, we have grown five battalions of special operations additional over what we had in 2001. We have grown 50 companies of civil affairs, 3,000 contractors.

STABILITY OPERATIONS

Mr. DICKS. Let me just add one thing; my time is quickly running out.

Secretary Gates recently wrote that the United States needs a military whose ability to kick down the door is matched by its ability to clean up the mess and even rebuild the house afterward.

What do you think that means.

General CHIARELLI. In my 2 years in Iraq, I saw that every single day, the ability to go in, apply kinetic effects and follow up immediately with those kinds of things that you would consider part of a stability operation. It was an absolute requirement. And when we did that, we provided for the safety of our forces; when we didn't do that, the neighborhoods became much more dangerous for us.

So Soldiers have to be able to—as Charles Krulak said a long time ago, they have to fight that three-block war. One minute they are applying kinetic effects, the next minute they are ready to go into stability operations; and it can change with a snap of your fingers.

Mr. DICKS. General, do you have anything else you want to add to that?

General AMOS. Sir, I think the kind of warfare we are in right now, and the Secretary has talked about, is going to be around for at least the next several generations. I think he is right.

But he also uses the terminology "a balanced force," and the net balanced force, we think the interpretation is, okay, our focus can be on this thing called "hybrid warfare."

This kind of warfare that General Chiarelli is talking about is, one day you are playing in cowboy stadium; the next day you are playing in the parking lot; and the day after that, or maybe that same day, you are playing in the Winn-Dixie parking lot over there, and you are playing different kind—and it all happened at the same time. So that is that hybrid warfare.

But the balance that we owe our Nation is the ability to be able to do that. And I think we have proven that we can do that really well. And we are doing it, by the way, with young men and women that are just good, solid soldiers and Marines; and we are training with those skills through all the different training regimens we have.

But we also owe our country the ability to be able to do those other things that represent the balanced force. In the case of Marine Corps, that is that forcible entry from a naval sea base or a naval operation. We are the only force that can do that. That doesn't mean the Army can't join us and do that; I am just saying that is a responsibility, that is core competency for the Marine Corps, and we owe that to our Nation.

So we need to be able to train and do those things as well. The growth of the Marine Corps, the drawdown in Iraq and the reasonable approach to Afghanistan are going to provide us that opportunity. But I think it is a balanced force; that, I think, is what we are talking about.

Mr. MURTHA. Mr. Frelinghuysen.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Gentlemen, thank you for the doubleheader today, this morning's hearing as well as the one this afternoon.

Last week we had some of the Air Force brass in here from TRANSCOM and the Air Mobility Command, and we obviously had extended discussion on airlift needs, the whole tanker issue. I don't want to get into that, but I would like your take on aviation readiness in a theater where we are going to be putting a lot more soldiers, and Marines particularly.

What is the state of aviation readiness in terms of choppers? And both the chairman and I have a keen interest in the aeromedevac in Afghanistan, given there is some estimate that if someone is wounded, obviously the sooner you get them to safety and to a surgical tent or whatever they might need for medical purposes.

Can you sort of talk to us about your general aviation readiness and the specific thing which affects the soldier's well-being, the ability to evacuate soldiers and Marines that are wounded?

General AMOS. From the Marines' perspective, both in the Anbar Province, we have had a pretty sizeable air combat element on the ground in Iraq for some time. And we have got a very small air combat element on the ground in Afghanistan right now, and we

are about to blow that balloon up. We, are going to put a pretty good-sized piece of both rotary wing and fixed wing and tactical air in Afghanistan.

CASUALTY EVACUATION

Mr. FRELINGHUYSEN. How many choppers do you have in country?

General AMOS. We have four CH–53Es in Afghanistan and four attack helicopters right now in Afghanistan for 2,300 Marines.

Mr. FRELINGHUYSEN. And, General Chiarelli, how-many choppers does the Army have?

General CHIARELLI. We will have—we are adding another combat aviation brigade for our 2nd Combat Aviation Brigade in Afghanistan, which will take us up somewhere in the vicinity, depending on the exact table of organization of that 2nd Brigade, over 220 helicopters.

Mr. FRELINGHUYSEN. Aero medevac, where do we stand in our ability to get our soldiers out on an expedited basis?

General AMOS. Sir, I was there a month ago. And again this is the southern part for the Marine Corps.

Mr. FRELINGHUYSEN. This is sort of the dedication to CSTAR, to some extent?

General AMOS. Sir, it is. And I primarily think it is not so much CSTAR as much as casualty evacuation, and the ability to do a medevac or a casualty evacuation for a wounded soldier or Marine. Again, it is a bit of an immature theater down in the Helmand Province right now, and it is about to become more mature with the advent of the, or the influx of forces. And we, too, are going to bring in a bunch of helicopters, along with the Army.

But right now, when we were there a month ago, the Marine battalion commander said it takes about 2 hours and 20 minutes, on average, to get a casualty evacuation moved from the point of being wounded to what we call Level II care.

Now, I will tell you, the Department of Defense, the Secretary of Defense, has taken that on. And to rearrange assets—and that is part of the reason why we are bringing in more assets, as well as the Army, to take care of that, but part of that is relying on our allies. In other words, having to rely on some of our allies to provide a casualty evacuation at 2:00 in the morning to a country that doesn't fly on low-light NVGs at 2:00 in the morning, they won't do it.

Mr. FRELINGHUYSEN. These are the same allies in some cases who are not joining the battle in the same way our people are, but they have assets to contribute to this getting our soldiers and Marines to get medical help?

General AMOS. Sir, they do in some cases. I will tell you that there are—from my personal opinion, there are not enough down in the southern part of Afghanistan, but that is about to change. And the Secretary of Defense is taking this on personally.

Mr. FRELINGHUYSEN. So the 2-hour thing here is going to be measurably shortened?

General AMOS. Sir, our goal is—when it comes to where the Marines are and anybody operating in a Marine zone is to get back to what we call "the golden hour," and that is, from the time you

are injured to the time you reach the first medical (Level) II treatment facility is inside 60 minutes.

We did that very well. The Army and the Marine Corps did that side by side in Iraq, and it saved an untold number of lives.

We have a lot of motivation to get back to that in Afghanistan. We are just not there yet.

Mr. FRELINGHUYSEN. We have a keen interest in that.

Thank you, Mr. Chairman.

Mr. MURTHA. Let me just say, the figure we have is a 72-minute average. Twice as many people die in Afghanistan, because they don't get the medical help, as die in Iraq—not quite that; it is 19 percent versus 11 percent. But this committee sent staff, and I went out to Nellis to look at the assets there, and we put $100 million into those assets.

If we don't know the problem we can't fix it. If you don't have the assets, you can talk about trying to put those assets out there, but if we don't know soon enough, we can't put the money in and get the assets there. This committee is concerned about that, but you have got to tell us when there is a problem.

I am surprised that you say that it takes 2 hours and 20 minutes to get them in. That is a revelation to me, because 72 minutes is the average.

General AMOS. Sir, that was a battalion commander. That is me, looking a lieutenant colonel in the eye and talking about the casualty evacuation. I said, "How long is it taking you?" "On average," he said, "2 hours and 20 minutes."

Mr. MURTHA. That is unacceptable.

General AMOS. I agree with you, sir.

Mr. MURTHA. Mr. Visclosky.

Mr. VISCLOSKY. No questions. Thank you.

Mr. MURTHA. Mr. Moran.

MISSION CAPABLE

Mr. MORAN. Thank you.

I have to say, boy, the Committee has a good staff. They do terrific work. For example, they bring to our attention that in 2003—and these are numbers I know that both generals are familiar with—50 percent of the Army was C–2 or better, and now we are down to 15 percent. And when you account for deployment, only 8 percent of Army units, both C–2 or better and available to address a contingency operation. And of that 8 percent only 4 percent are C–1, fully mission capable.

So this is something the Chairman has been harping on for basically 5 years, but every year it just seems to get worse. And, of course, it is the critical issue that we are bringing, that we are discussing today. The Marine Corps is in better shape in that situation.

And we are concerned. I share the concern of the chairman and the vice chair about subjective ratings. Of course, this D category is a concern.

STOP LOSS

But the first thing I want to ask you specifically about is stop loss. I don't know about my colleagues, but it may just be that

when somebody is subjected to stop loss, those are the ones you hear about. But, boy, I hear a lot about folks that have been kept in a voluntary service through what you consider to be stop loss. And the subcommittee provided money, $72 million, to deal with that, yet none of it has been used? Why might that be?

And a stop loss is more an issue with the Army, so let me ask General Chiarelli.

General CHIARELLI. Well, sir, both the United States Army and Department of Defense are working on a comprehensive stop loss plan that will be complete very, very soon that will look at all of stop loss, not only those soldiers that are stop loss, but stop loss as an instrument that the Army uses in the future. And I expect that before too long you will have the opportunity to see—I know they are putting the final touches on that, and I know it has the personal interest of the Chief of Staff of the Army, the Secretary of the Army and the Secretary of Defense.

I do, and I know that no one cares about soldiers more than the members of this Committee. And I know we are focused on that 1 percent of the Army, less than 1 percent the Army, that is stop loss—6 to 7 percent in any one time. And I know that this Committee knows that every one of those soldiers signs a contract that indicates that that might happen.

But I will tell you that when we start paying that money, you need to understand that stop loss numbers are going to go up. Because when Private Chiarelli can reenlist in February 2 months into a deployment, he is not going to; he is going to collect whatever that final amount is until the last month before he goes home; and then, if he plans to reenlist, he will reenlist.

Mr. MORAN. So you are afraid they are going to game the system if you make that incentive available?

General CHIARELLI. Sir, I am not saying we can't make the incentive—I am just——

Mr. MURTHA. We have solved this thing. We have put $500 per person in for 160,000, whatever it is. We don't want any argument from the Army. I have heard all the arguments. The Secretary of Defense talked to me about it, and he rejected your proposal.

We expect you to work something out.

General CHIARELLI. Sir, I will do whatever we are told. I just wanted to give you——

Mr. MURTHA. I heard all the arguments.

Mr. MORAN. Well, it sounds like we are not going to pursue this any further, General. I think the Committee is—on the policy is pretty clear. Secretary Gates did say publicly that he is going to end it. And there must be a way that you can deal with the potential gaming of the system.

The IRR is a problem with the Marine Corps, though, more than the Army. Do you want to address that issue, General Amos?

General AMOS. Sir, it is actually not a large issue now. Some time ago the Secretary of Defense authorized us to, authorized the Marine Corps to involuntarily recall up to 2,500 Marines. To date, we have recalled, involuntarily, 1,779 of those. Right now, in Iraq we have 463 members on this current deployment in Iraq out of 22,000 Marines that are over there on IRR involuntary recall. That will end after the end of this year. We don't like it.

But here is the real truth with the IRR recall. A lot of these young men and women want to come back on active duty, but they can't volunteer because they will lose their jobs. And so the agreement we have had with Marine Forces Reserve (MARFORRES) are, when you do this and you are about to call somebody back on active duty involuntarily, ask them if they are covertly a volunteer. And in the clear majority of the cases they are. There are some, I am sure, that are not, but most of them are; and they say, "But we can't do that, we can't volunteer, so you tell us, and we will be happy to come."

So we have very small numbers, and we are going to cut that, off at the end of the year.

Mr. MORAN. Good. Because the fact that it is such small numbers, I think, is probably an even greater argument that it doesn't need to exist. Because if there is anybody that is involuntarily serving, it diminishes our confidence and pride that this is a voluntary Army. So you understand that.

Mr. MURTHA. The gentleman's time has expired.

Mr. Kingston.

DEPOT MAINTENANCE

Mr. KINGSTON. Thank you, Mr. Chairman.

General Amos, you have—27 percent of your equipment is in theater right now?

General AMOS. I am sorry, I can't hear you.

Mr. KINGSTON. Twenty-seven percent of your equipment is in theater; is that what I heard?

General AMOS. I would have to take a look at that. I think that is probably—I may have said that in my statement.

Mr. KINGSTON. I think it was in there.

General AMOS. It probably is. That number sounds right, sir.

Mr. KINGSTON. Well, you only have two depots. Is that enough to take care of all your stuff?

General AMOS. I only have two what?

Mr. KINGSTON. Depots.

General AMOS. It is. It is. In fact, right now, both in Albany and Barstow they are working—at least at Albany, I am not sure about Barstow, but Albany is working one shift. They have the capability through contractors, through temporary hires, through overtime, to easily go to two shifts; and they are prepared to do that.

In fact, the plan is under way right now, as we retrograde that equipment out of Iraq, that I talked about earlier, that will find its way to Blount Island and from Blount Island it will get dispersed to either Albany or Barstow for rework. And I have been assured that there is plenty of space, head space, to be able to rework all the equipment we have.

Mr. KINGSTON. So there is actually maybe even a little more capacity in Albany than you are utilizing.

General AMOS. There is, sir. In fact, I can tell you, I have got it in here, we are doing a significant amount of work right now for other companies, other services at Albany.

Mr. KINGSTON. In fact, as I recall, about 5 years ago you uparmed the Humvees for the Army at Albany.

General AMOS. I can't tell you specifically. I can tell you how many Humvees we did at Albany.

But I will give you an example. Last year, fiscal year 2008, we did $392 million worth of business at Albany for the Marine Corps. The other services we did $85 million, and for commercial contracts we did another $26 million.

So it really becomes a business at Albany. And the commander there, Major General Williams, looks for business wherever he can get it. He has the capacity to blow that up to two shifts a day and take all that stuff in.

So we do business for the Army, I am sure, but I just can't tell you. I don't have those figures in my data.

Mr. KINGSTON. Mr. Bishop knows more than I, but I am 90 percent sure that they did start up-armoring the Humvee for the 3d Infantry in maybe 2004 or something like that.

General AMOS. I will tell you, we took 934 Humvees in fiscal year 2008 and rehabilitated them there at Albany.

Mr. KINGSTON. With all the reset that is needed, is there more that the depots can do for you right now?

General AMOS. When you say, "Is there more they can do," I mean, right now, they are doing everything that we have asked them to do with regards to equipment. Where the more comes in is, we have got to get them the equipment to be able to work on and to be able to rehabilitate. And that goes back to what Congressman Young said earlier, How much of that stuff are you going to bring out of Iraq? And we never really answered that question.

We are going to bring everything out of Iraq unless it is sitting over in a junk pile because it has been blown up, or the U.S. Government has authorized a foreign military sale to Iraq, the country. But we are going to bring everything back, and it will be triaged there at Blount Island. And if it is good or it is cost effective to rehabilitate it, then we are going to send it to other depots.

Mr. KINGSTON. I appreciate that. And I don't know if Mr. Bishop has any questions that we can yield on our time.

With that, Mr. Chairman, I would yield back.

Mr. MURTHA. Mr. Rothman.

Mr. ROTHMAN. Mr. Chairman, I would be willing to yield to Mr. Bishop now since he represents Albany.

Mr. MURTHA. Mr. Bishop.

RESET FUNDS

Mr. BISHOP. Thank you very much, my colleague, and thank you, Mr. Chairman.

And welcome again, gentlemen. Reset funding and prepositioning equipment sets, two issues that are very important to me, very important to Albany as far as the Marine Corps is concerned, but let me deal with the Army first.

This Committee over the past few years has appropriated about $8 billion to the Army for reset; and as I understand it, about $3.7 billion of that has been obligated. But the Army's equipment on hand continues to be an inhibiting factor in the readiness status of the forces.

And it is expected that the Army is going to request additional reset funds in the 2009 supplemental. But, of course, we don't

know what, because I think the Secretary is not willing to have that discussed while the budget is still being formulated.

But are you facing any major capacity problems? Is the fact that production challenges that are facing the Army reset in terms of depot capacity and industry—because I know we were doing some of your depot work in Albany, as Mr. Kingston alluded to—and do you still have equipment in depots, like in Anniston, still sitting out or waiting for repair? And what will this supplemental funding request do to your reset requirements?

General CHIARELLI. Well, I can tell you there are depots who are just doing a magnificent job on reset. And the capacity and ability of the depots to reset our equipment, particularly given our short dwell time back at home, has been one of the true success stories of this conflict.

Mr. BISHOP. I don't mean to interrupt you, but they are telling me that lined up outside the depot in Anniston are tons and tons of these damaged vehicles that have been sent back.

General CHIARELLI. Let me take that for the record, sir, and go and check on the exact conditions in Anniston.

[The information follows:]

In order to provide a comprehensive response regarding equipment backlog at ANAD, we have verified our depot capacity and programs for critical systems at ANAD and the remaining four maintenance depots: Corpus Christi, Letterkenny, Red River, and Tobyhanna Army Depots. We continue to have ample capacity to meet Army requirements.

The few cases where our depots have not been able to meet the Army-directed production schedules have been the result of supply chain issues or lack of unserviceable assets, and not the capacity of our depots. For example, at Anniston, our slower-than-required production of M2 machine gun production during the first part of fiscal year 2009 (FY09) was the result of nonconforming parts in the supply system. Army Materiel Command, Defense Logistics Agency, Headquarters, Department of the Army and parts suppliers worked together to resolve these problems. Once acceptable parts were available in sufficient supply, ANAD was able to quickly increase its production of M2 machine guns from 400 per month in 1st Quarter FY09 to 700 per month to meet the Army requirements. An example of unserviceable asset shortfall is the M1114 HMMWV program at Red River Army Depot. Currently there is a shortfall of several hundred vehicles scheduled to be shipped from Southwest Asia that have not yet arrived, therefore, impacting the production schedule.

Our depots have the capacity to accomplish additional workload in all areas, especially considering the additional capability we have available through partnering arrangements and national maintenance contracts with original equipment manufacturers such as Oshkosh, Raytheon, and Boeing Aerospace Engineering.

Mr. BISHOP. Okay. You may continue.

Sir, were you done?

General CHIARELLI. I will tell you that some of that equipment readiness that you allude to is masked by the fact that when a commander doesn't have his equipment and it is in reset, when he is reporting against equipment on hand, of course that equipment is not on hand, it is in reset, which makes his C-rating or D-rating go down, particularly his C-rating. His D-rating really never catches up to get up to where we want him to be at D–1 until he gets over and falls in on the theater-provided equipment that is only available in Iraq and Afghanistan for him to fall on.

And all our units that are in Iraq and Afghanistan are C–1—or D–1 for its equipment.

PERCENT EFFECTIVENESS

Mr. BISHOP. You haven't implemented the D-ratings as yet; you are just in the process of implementing those.

You haven't fully implemented the D-ratings yet, have you?

General CHIARELLI. We have not, but we have the percent effectiveness ratings. And a large majority, or lower percent effectiveness ratings you see now, although you can't see it because we have never provided that specificity that I talked about earlier, a large reason why those percent effectiveness ratings stay low until it gets over there is because it falls in on that theater-provided equipment.

Mr. BISHOP. Exactly. And that gets us to the question of other contingencies.

If the unit is ready when it is deployed, but the part of the unit that is not deployed, that is back home, is in a state of unreadiness, a very, very low state of readiness; is that not correct? Because the equipment is deployed, the personnel is deployed, and basically the unit is depleted except for the stay-at-home portions.

General CHIARELLI. At the current demand for our units our ratings are lower than they would be if we were able to get more dwell time. But right now we have over 32 units when you figure in the friction deployed brigade combat teams around the world, 32. That is a huge number. And that is why you have that dwell time, that 1 year deployed, 1.3 at home.

Mr. MURTHA. Mr. Rothman.

FORCES OUT-OF-BALANCE

Mr. ROTHMAN. Thank you, Mr. Chairman.

Thank you again gentlemen. Good to see you again. And thank you for your service, really outstanding.

You each in your respective written testimony, and I am sorry I was late for your oral testimony, so if you covered this the answer to this question, I apologize.

Talk about your forces out of balance. Does that sound familiar? And the question is, given the present trend in funding that you reasonably anticipate in the upcoming supplemental and in the future, how long before it will be before the Army and, respectively, the Marines are in balance?

General CHIARELLI. My in balance number is a factor of demand, and that is what is causing me to be out of balance. It takes me time to reset both people and equipment. And with only a year plus a couple of months between deployments, that is what has put me out of balance.

We expect and we hope——

Mr. ROTHMAN. So, General, it is not about funding then, per se?

General CHIARELLI. My out-of-balance problems right now are primarily because of demand, and we hope to be in balance where we are 1 year deployed, 2 years at home, or close to—or 18 months at home; I am sorry, 1 year and 18 months at home. We hope to be there by 2011.

Mr. ROTHMAN. Thank you.

General.

General AMOS. Sir, I put in my written statement the estimate that $20 billion—and I am not getting out ahead of OSD on this, but $20 billion today is the rough reset cost for the Marine Corps. There are a couple of points I would like to make. If the war ended today and we said, this is it, everybody come out of Iraq, come out of Afghanistan, it would probably take 5 years for the Marine Corps to get rebalanced or readjusted. And that is not because Congress isn't being generous.

It is a function of production lines and contracts and some things that have gone out that they aren't even making anymore, legacy systems, and being placed with a newer generation of equipment.

But $20 billion is a rough assessment. I am told that my predecessor, General Magnus, when he sat here last year, when asked that question, said it would be about $15 billion.

I asked my staff. I said, well, so far this Committee has generously given the Marine Corps a little over $12 billion for reset. So I said, What have we done with it?

Well, we have gone and we have bought new Humvees, we have bought new LAVs, we have bought the stuff that has been blown up, the stuff that you see on TV, we are wearing stuff out at six times the rate that it was built for. The Humvee, I think, has typically averaged 7,000 miles. We are wearing them, out.

Mr. ROTHMAN. I get it. We have got to grow the force, but that all depends on demand on even a growing force, and then replace the burned-out equipment.

I want to make sure I ask one last question, General Chiarelli, and I apologize if I am the only one who doesn't know the answer to this question. You said in your statement only three out of ten applicants are even eligible for military service—three out of ten applicants, people applying. Could you explain that, please?

General CHIARELLI. They have disqualifying conditions, everything from schooling to health problems to obesity, that make it impossible for that portion of the population to join the Army. So out of every ten Americans that are in that population only three qualify.

Mr. ROTHMAN. Three applicants. That is amazing. Thank you.

Thank you, Mr. Chairman.

Mr. MURTHA. Ms. Granger.

Ms. GRANGER. I don't have any questions.

Mr. MURTHA. Mr. Hinchey.

TRAINING, CAPABILITIES, AND EQUIPMENT

Mr. HINCHEY. Thank you, Mr. Chairman.

Thank you, Generals. Thank you very much for your leadership and the very important work you are doing for this country. Thank you all very much. I appreciate it.

But reading through the information, I just get the impression that your job is getting more difficult and has gotten more difficult over the last several years. The condition of many people in both the Army and the Marine Corps, their capability, the capability of dealing with issues, has declined substantially since the invasion of Iraq.

According to the information that we have, at least 50 percent of the Army was C–2 or above, and 80 percent of the Marines was

C–2 or above. Now 15 percent of the Army is C–2 or above, and about 50 percent of the Marine Corps is about C–2 or above.

And what you were just answering about the qualifications, also, I think, has something to do with that, because the qualifications for enrollment in the military declined over the last several years. And I think that that has put the military in a rather rough situation, in a more difficult set of circumstances.

What do you think should be done about this? Do you have any plans? I know you are thinking about it. But do you have any ideas about what should be done, how we should handle this, how we can deal with the effectiveness of the military now that we have 17- going in, 7- of the 17,000 going into Afghanistan, particularly in dealing with a different kind of complex situation there, different than the circumstance that they have been dealing with in Iraq?

General AMOS. Sir, I will take it on first.

Back to the—kind of the beginning of what you said, Congressman, I want to assure you that the C–3 and C–4 ratings, especially when it comes to personnel, are not a function—and it comes to training—are not a function of the quality of the young man or woman we have in, because that young man or woman is better today than they were when we crossed the border in March of 2003. The quality is there; I can assure you of that.

The Marine Corps hasn't lowered its standards on anything. In fact, just by virtue of the numbers have increased in their recruiting. So the quality of it is more than bravery. It is that young man or woman making those decisions that we talked about in the very last hearing that we were in here. So I want to assure you of that.

The second piece of it is that the training part, when it comes to the lower rating of C—50 percent for us, and I really think it is 47 percent of our deployed; our nondeployed units are at C–3 and C–4—that is strictly a function of the fact that we have stripped out those principal players that we need back home, to train, and have deployed them in the way of individual augments, joint manning documents.

We have taken a large percentage of the Marine Corps, and I think I speak for the Army, and put them forward along with the combat forces. So you don't have the leadership back home in some cases. It is not willy-nilly. It is not, the prisoners are running the battalions. That is not it. But you lack some of those unique skills back in the rear.

The other thing I will tell you is that the equipment piece of this thing, we have the bulk of the equipment we need. Now, we are wearing it out, blowing it up and whatever, and it is in pretty good shape; but we have taken a larger percentage of that stuff back in the rear and moved that forward. So now the folks in the rear don't have all the equipment that they need to train on.

It is not a function of, you didn't give us the money. We have been buying everything that we could get our hands on. But the fact of the matter is that the requirements in Iraq and Afghanistan are significantly greater equipment-wise for an individual unit.

I will give you an example. A typical infantry battalion in the Marine Corps has about 40-plus Humvees. The ones in Iraq right now are running around about 160 and 180 Humvees, because they are spread out.

So that is where the equipment has gone. It is in good shape. We just don't have enough of it back in the rear to get the training levels of—to be able to increase the C-ratings that we are talking about.

General CHIARELLI. I have very little to add to what Jim says.

The number one thing to improve those C-ratings for the United States Army would be to increase the time at home between deployments. It just has such an effect; it has an effect on equipment.

But what we are seeing and what I am faced with right now, since the Secretary of the Army has put me in charge of taking a look at this whole problem we have with the stress of the force and the suicides, the increase in suicides that we are seeing, is the stress on individuals. And there is no doubt in my mind that when you are on deployments, third and fourth time on 12-month deployments——

I did mention to the chairman just before we started, and I think it is noteworthy, that we won't get our last combat brigade off of 15-month deployment until June of 2009. We will not get our last combat service support and combat service unit off of a 15-month deployment until September of 2009 because they all deployed before August of 2008 when we went to 12-month rotation. So that is very, very difficult.

Those units will come home after a 15-month deployment, and if demand stays the same and we are at 1.3, they won't even get a 1-to-1 dwell log ratio.

So many of the problems that we see today, I believe, will be well on their way to being solved if we can extend that amount of period. And that is what General Casey talks about: Get the units back in balance, so they can both train on their deployment medal, their core medal, and you will see improvements there; and then help recover people and equipment.

Mr. HINCHEY. Thank you.

Mr. BISHOP. Will the gentleman yield?

Mr. HINCHEY. I think my time is up.

Mr. MURTHA. Mrs. Kilpatrick.

DEPLOYMENTS

Ms. KILPATRICK. Thank you, Mr. Chairman.

The title of this closed hearing is Readiness—I think the last two or three, and we are getting around the corner.

We are not ready. I don't feel like you are ready.

The 1 to 1.3, which I believe is mandatory, you had two young sergeants here earlier today that have been deployed twice. Using them as an example, did they get the 1.3? Are we about to send them back to Afghanistan without it?

There was one of each. I know that is an average, so maybe one did and one didn't.

General AMOS. Sergeant, the Marine sergeant got 1-to-1 dwell between. He is working for me right now, so he is into his dwell. But between deployments he was gone 7 months and home for probably 7 months, maybe even 6 months.

Ms. KILPATRICK. And is that in the States or was he with his family for those months?

General AMOS. Yes, ma'am.

Ms. KILPATRICK. Yes, ma'am, what? I mean, was he back here?

General AMOS. He was back here.

Ms. KILPATRICK. Here in the U.S.?

General AMOS. He was back here in the United States. He was back at Camp Lejeune between the deployments.

Ms. KILPATRICK. I guess I am asking, in that 1.3 or 1.8 that you talk about that is out of the theater, back in the States, is that also included with their family or is that not included?

General CHIARELLI. I would be more than happy to take that on, because I get beat up every time I go to a spouse group of deployed spouses. I say, Well, we are giving your husband 1 year at home, and I get fingers in my face saying, No, you are not, General; don't tell me that, General. My husband comes home, he has to go to a noncommissioned officer course for 2 or 3 months. He comes back, he is now in his train-ready phase, he goes to the field to train up because we have to train before we deploy.

They say, Don't tell me, General, that my husband is home for 12 months; he is not with me for 12 months.

Ms. KILPATRICK. But is he in the house for 12 months?

General CHIARELLI. No, he is not, when he deploys from Fort Campbell to Fort Knox before he goes to the field, and his wife is back at home.

Ms. KILPATRICK. And back at home is in another State?

General CHIARELLI. No, it is probably right there, ma'am.

Ms. KILPATRICK. I think that makes a difference. And you all have said that over in everything we read—family contact, children contact is so important.

So I think we are ready because you said so, and I wouldn't second-guess that. But I think not because of the suicides, the tension, how we are sending, we are sending you to a new terrible terrain for another increase in the war that we have been in before we even started in Iraq.

And you talked about the demand, General. Demand is going to be more, it is not going to be less. And your men, particularly in the Army men and women, are going to be more tired and more worn out because of the short times home, because of the toughness of their assignment.

The chairman said over and over again that we want to help. And I know you all are good stewards, and I appreciate your service and all that you are doing. But we can't help if we don't know. And our number one goal is to save and serve the men and women that you command, that they can be whole and well and alive when they come back.

And this is a closed hearing, so I just expected to hear something more closed. I am kind of hearing the same thing. And I know that is what you are supposed to do, you are in my range absolutely and all that.

But having said that, I don't feel good that we are protecting our men and women who commit their lives to our country. You are doing the best you can with what you have, but I just don't feel like we are helping enough and you are not giving it to us enough.

Nothing to take away from you. It is just that since I am a lay and new and all of that. They deserve everything they need, much

of which is home with their families and that wife you just described.

Being out of theaters is three-fourths of the battle; that is good. And of course they have to keep training. But they also need time so their children can be healthy and their wives can be. Do you know what I mean? That unit and that extended family, I don't think anything substitutes for that.

And whatever we have to do to get you there, which may be more enlisted. I mean, let us up the numbers. Nobody has talked about that in any of the meetings I have been in yet and how we do that. Is that necessary? No one has spoken to that.

So thank you for your service. I don't even want you to answer unless you feel compelled to do so. I have got a raw feeling right here. And the demands are going to increase; war is not going to end.

Arbitrarily bringing them home this October or this June, that is too arbitrary. And I don't know, Joint Chiefs of Staff, they must say something to the President. But together we have got to make it better. Ending both of the wars and bringing all of the soldiers home is my first wish in life.

But what you do is major, and it is also tragic. And it is war; we are at two wars, so nothing is the same.

Mr. Chairman, thank you, sir.

Mr. MURTHA. Mr. Young.

INDIVIDUAL READY RESERVE (IRR)

Mr. YOUNG. Just one question. On the IRR, as you deal with all these personnel issues, how often have you had to use call-ups from the IRR?

And the second part of that question, how long is a person considered to be a member of the IRR or subject to call-up from IRR?

General CHIARELLI. Any numbers I would give you, sir, would be swags right now. If you would let me take that for the record, I will get you the exact numbers we are calling up right now and try to give you some historical data on the number of IRR that we, the United States Army, have called up. And I am not sure what the age restriction or time out of the service is for calling up the IRR, but I will find out and get it to you.

Mr. YOUNG. That would be fine. Thank you.

[The information follows:]

Over the past eight years, the Army has used the Presidential Reserve Call-up Authority twice: once for operations in Kosovo and also for operations in Bosnia.

Ready Reservists are currently called to active duty pursuant to title 10, US Code, Section 12302, for a period not to exceed 400 days: 365 days involuntary mobilization, plus 35 days authorized for out-processing and post-mobilization leave.

Mr. MURTHA. Mr. Dicks.

STANDARDS FOR RECRUITS

Mr. DICKS. Thank you, Mr. Chairman.

In December—excuse me.

In addition, for 2008, 83 percent of the active Army met the high school diploma benchmark. The Marine Corps, on the other hand, attracted highly qualified recruits; 96 percent of the Marine Corps recruits are high school graduates, and 66 percent score in the top

three categories in the Armed Service Vocation Aptitude Battery Test.

General Chiarelli, with the state of the economy and people more willing to join, will the Army be able to raise its standards of recruits from what it has been?

General CHIARELLI. We already have, sir. We have already stopped giving the waiver for adult major misconduct. It is no longer given. So if you are considered an adult in a State and conduct some kind of major misconduct and are found guilty of that major misconduct, you cannot join the United States Army. That is no longer a waiver.

I have been following the recruiting figures here in the last couple of months. And I think you know that it is very, very hard, at least for the United States Army, to get over 90 percent of the high school graduates in January. Those numbers usually go up when you get near the school time and people come out of school.

We have seen our numbers up over 90 percent in the last 2 months that I have checked, in high school graduates. We are because of—and I think it should be, you would all understand—seeing a tremendous improvement in the quality that we are able to attract to the United States Army because of, I am sure, the economic situation our Nation finds itself in.

Mr. MURTHA. Could you be more specific? Exactly what is the difference?

I mean, when you went to a volunteer Army, the reasoning was, you would have more high school graduates, the standards would be higher, we don't want draftees. That was where you were, and where are you going now?

General CHIARELLI. I don't have those figures right in front of me, but I know we were down as low as 79 percent. I expect those numbers to steadily increase; I know they are already up in months.

Mr. MURTHA. Send it for the record.

General CHIARELLI. I will. I will provide you those Mr. Chairman.

[The information follows:]

In fiscal year (FY) 2005, the regular Army's Tier 1 Education recruiting accomplishment (i.e., high school graduates and above) fell below DoD's Standard of 90% for the first time since FY83. Specifically, the Army's Tier 1 Education recruiting percentage fell to 87% in FY05, decreased to 81% in FY06, and reached a 79% nadir in FY07 before rebounding to 83% in FY08.

In response to this problem, Army leaders implemented programs and policies to attract more new recruits with a Tier 1 Education credential. Currently, the Regular Army's New Recruit Tier 1 Education percentage is 94% and the Army is expecting to close-out FY09 close to that percentage.

Mr. DICKS. General Amos, even though the Marine Corps is growing to an end strength of 202,000, the Marine Corps has always been very successful at maintaining a high level of recruits. Can you explain why?

General AMOS. Sir, the quality of recruits, even from last year, has gone up from 96 percent, 96.2 percent high school graduates, to 97.2 right now. So I will tell you, I think we have it a little bit easier. And I mean that because we recruit to a very narrow slice of the American society—the clear majority of young men and

women don't want to join the Marine Corps—and we have an attraction to that very narrow band. We promise them——

Mr. DICKS. Like Mr. Murtha and Mr. Young.

General AMOS. And his brothers and his nephews. But we do, and so we have a very narrow band.

Our numbers, we are going to recruit about 42,000 this year. We are well on our way. In fact, we are having to slow down the recruiting a little bit. It has been very successful.

But I do think we have it a little bit easier. And I tell you that the young men and women, the athletes, they come out and they say, I want to be a part of that organization. It is attractive to them. So it has been good to us.

Mr. DICKS. What about—how do you do your recruiting? Do you have professional people that are officers or not NCOs? Who do you use to recruit.

General AMOS. Sir, we use NCOs. We have officers that are the commanding officers; the recruiting stations, we have officers to recruit officers; but the clear majority of our recruiters are young sergeants and staff sergeants.

And the recruiting screen team goes out once a year and they pick the best that we have out there. We force them, in many cases against their will, to come in to become a recruiter. We train them, and then we send them out for 3 years, and we hold them accountable.

So it is our NCOs. These kids are ripe. Half of them, in fact, probably almost all of them, are wearing combat ribbons with multiple deployments. The only reason they don't want to go become a recruiter is because it is probably the hardest job in the United States Marine Corps. They would rather be in combat than have to go around and try to recruit two, three recruits every single month per man.

TRAINING EQUIPMENT

Mr. DICKS. That is a good point.

Going back to just one thing, and I will be done, Mr. Chairman. To both of you, what has been the greater hindrance to full spectrum readiness—equipment on hand or trained personnel or both? It is the equipment that is the problem, right? We don't have enough equipment at home to train the people when they come back?

General CHIARELLI. My number one problem, sir, is time at home to get to those C-ratings that you are looking at. It is time at home to do that training in addition to your deployment training, because they are two different training sets.

Mr. DICKS. But we do have a lack of equipment?

General CHIARELLI. We are able to get——

Mr. DICKS. I know the Guard and Reserve—the Guard does, for sure. What about the Army?

General CHIARELLI. We are making great improvements. Thanks to the work of this committee, we are making great improvements on Guard equipment also, sir.

It is time at home for the active component force rate.

Mr. DICKS. That is your biggest problem.

General Amos.

General AMOS. Sir, there is equipment shortfall back home. Again, the aggregate number of pieces of equipment are in the Marine Corps. There is just a disproportional amount of it forward deployed because of the increased requirement in theater, which means we don't have as much we need back at the home station to train. So that is absolutely correct.

The other thing that we lack back home is the time to train. Even if we had the equipment back here to be able to do the other full spectrum operations, that other piece of the balanced core capabilities that you expect of your Marine Corps, we don't have enough time to do those kinds of things.

We are going to get there. I think we are headed in the right direction. And I would like to be able to come back a year from now and say, I think things are—I think we are getting back, I think our dwell is getting better, I think we are able to do some of the amphibious kinds of things that you expect your Marine Corps to be able to do.

We just can't do all of that right now. We do pieces of it, but we can't do it universally across the Marine Corps.

Mr. DICKS. Thank you.

Mr. MURTHA. Let me add the recruiting of the Marine Corps.

Now, when I joined, my mother cried the whole way to the recruiting station. And she cried and cried and cried. She wanted me to finish college. Then, when my second brother went, she cried; the third brother went, she cried.

The fourth brother, she joined me and said, I am afraid he is going to join the Army. So the information the Marine Corps puts out has something to do with recruiting people.

Ms. Kaptur.

General AMOS. Sir, you have got to remember this guy to my right is my blood brother right now.

General CHIARELLI. That is okay, sir.

Mr. MURTHA. Ms. Kaptur.

Ms. KAPTUR. Mr. Chairman, I arrived late, so I prefer just to listen for awhile.

Mr. MURTHA. We have reached the end.

TRAINING

Ms. KAPTUR. Since I haven't heard all the questions, I want to thank both Generals for appearing today, and I am sure someone else has asked about where and how irregular warfare training will be done.

Has somebody else asked that question?

Mr. DICKS. We just barely got into it. I think it could be followed up on.

Ms. KAPTUR. I was very interested in Secretary Gates' statements back in December. And I am just curious at this point, for the Corps and the Army, how you are thinking about this irregular warfare proposal and where such training would be done and how it would be done.

General AMOS. Ma'am, if I can just answer for the Marine Corps, it is already being done. It has been done now for the last several years, and that is the reason why we have met with such success in Iraq.

We are doing that through not only our professional military education, the actual in-house schools that Marines go to, but also the training out on 29 Palms, the desert training, the things that we call home station training. We do language training, we do immersion language training back at the units before they even go to the advanced training before they deploy.

We have stood up a Center for Irregular Warfare in the Marine Corps. We have stood up a Marine training and advisory group which deals with that kind of—that hybrid warfare, kind of helping other nations train their military and their police. We are doing that right now and we are doing it quite well.

So we have actually—if you were to say, Marine Corps, start irregular warfare training today, I would look at you, ma'am, and I would say, "Ma'am, we are already doing it."

When I say, "There is nothing else that needs to be done," I don't mean it to sound arrogant, like. I am just saying that we have invested a significant amount of the Marine Corps training and retorqued it so that we take those young men and women and just train them in hybrid warfare.

Ms. KAPTUR. But—your focus is on training your own force, but then transferring those skills from a security standpoint to the host nation? It does not involve the development of civilian systems?

You stop at the security mission, correct?

General AMOS. Actually, what we do is capitalize on the civilian mission.

For instance, we have police forces. It started with the Los Angeles police force, and the Army has it, and we actually bring policemen in. A lot of them are Reserves. And we bring these law enforcement teams in and they help us; they help teach us how to train Iraqis and Afghanis.

So there are skill levels that are out there that we bring in to be able to train other countries. Law enforcement is a good example.

I will tell you one that we need to bring in and develop, and that is probably agriculture. When you start thinking about trying to transition the poppy fields in southern Afghanistan, we are going to need that help.

Now, I will be honest with you, we have had some talent within our services. We have got farmers, but we are going to need some help from the other agencies to come in and try to give the Afghanis an alternative to growing poppies.

But there is a good example of some stuff that really needs to come into our service to help us.

Ms. KAPTUR. What about Army?

Thank you, General.

General CHIARELLI. Just to build on that, Jim's last point, we have since stood up agriteams. They are National Guardsmen from farm States. I just visited one at Camp Atterbury here a couple of weeks ago. It was an amazing sight to see, 60 men—farmers with guns, so to speak—who had been partnered with Purdue University for a 9-month period. They were learning the exact dialect of Urdu that they would be deploying into in Afghan and, at the same time, learning farming techniques that could apply in Afghanistan—not the ones that would be used here in the United States

in Nebraska or Iowa, but the ones that could be used in Afghanistan.

These teams are strategic in nature. They have strategic impact. It is one of the most successful programs that we have going. We are doing the same kind of thing in our national training centers and have been doing it now since 2003–2004.

I might just add, when I took the 1st Cavalry Division to Iraq in 2004, I had to drag my officers kicking and screaming to cultural awareness classes and try to get them to pick up on their own a little bit of Arabic. When we left, I did an AAR, after action review, with young captains and lieutenants. I didn't do it, I had a major do it, so I would get through.

The two things that they said that they would have changed in their training program before coming over would have been, number 1, "I would have had more cultural awareness training," and number 2, "If you would have brought me to the level of language proficiency I was on day 90, I would have been there on day 1. If you are all forced to learn the language, you just want to have those skills on day 1, rather than day 90."

I am proud of all our forces and how we have done that.

Mr. MURTHA. Ms. Granger.

TIME AT HOME

Ms. GRANGER. Thank you.

Today, we have talked about training and equipment, recruitment, meeting your recruitment goals, and contractors. But you say the biggest problem is time at home.

It does go back to Ms. Kilpatrick's question. It is obvious to me, you either need more people or you need less mission. So is it more people or are you doing—for instance, when you talked about, it was quoted, "rebuilding the house," well, is it the military who should be rebuilding the house or less of that mission?

General AMOS. Ma'am, this Committee 2 years ago, when the Marine Corps said, "We need to grow to 202,000 to increase the dwell time"—in other words, to give us that breather in between so we can do the things that we have just talked about—this Committee supported it in money, in spirit and right on up to the fact that we are just about there. So it is a function of, you need more people.

But what has happened in that same period of time, the demand in many cases has increased. In other words, when the Marine Corps said, "We need to grow to 202,000," the Marine Corps was sitting with about 23,000–24,000 Marines on deck in Afghan and Iraq. We had nobody on deck in Afghanistan.

Today, we have about 22,000 Marines in Iraq; 2,300 on deck in Afghanistan, putting another 8,000 in there.

So what has happened is we have begun to eat some of that elasticity that we hope to be able to provide our forces back home. Now, that is the bad news.

The good news is that I think the way we are going with a drawdown in Iraq and what I hope is a right approach in Afghanistan, I think we are going to be able to see what you are talking about. But you are not going to see it right now. You won't see it in the Marine Corps for probably another 18 months.

General CHIARELLI. I can control just about everything but demand, ma'am. And that is the problem I have right now. The demand for Army forces is so great.

As I indicated, we have 26 brigades deployed worldwide, not just in Iraq and Afghanistan, but in other places. The brigade that is sitting in Korea today might as well be sitting in the middle of Baghdad because I can't get at it. It is deployed.

And in addition to that, replacing those brigades takes me another six brigades' worth of friction at any one time, because for a period of time, I have two brigades doing the job of one.

So when you get up in numbers of over 30 that is where I am seeing the stress on the forces, in that short period of time they have back home, that dwell time, in order to meet this demand. And that is the only thing I can't control right now.

Ms. GRANGER. Thank you.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Dicks.

AIR REFUELING

Mr. DICKS. General Amos, whe the Air Force acquires a new tanker, would you like it to be able to refuel the Marine Corps Osprey, as a personal matter?

General AMOS. Sir, I think you asked me that question last year, didn't you?

Mr. DICKS. Yeah. I think you said "yes" last year, too, as I recall.

General AMOS. As a matter of fact I believe I took that for the record because I didn't really know.

I know the MV–22 Osprey tanks behind Marine C–130s and Air Force C–130s and airplanes like that.

I don't know that—I think the answer I got; I had better be careful here—I don't think we tank the V–22 off of Air Force C–135. In fact, I know we don't.

Mr. DICKS. Wouldn't it be in terms of just flexibility, if you would be able to have the ability to do it?

General AMOS. Sir, I am a pilot and I have tanked off of every kind of airplane airborne and you can never have enough gas.

So does that——

Mr. DICKS. Thank you.

Mr. MURTHA. The hearing is adjourned until 10:00 a.m., Thursday, March 12th.

Thank you very much, Generals.

[CLERK'S NOTE.—Questions submitted by Mr. Boyd and the answers thereto follow.]

SINCGARS

Question. When does the Army expect to make an award on the Request for Proposal for SINCGARS?

Answer. The Army expects to make an award at the end of May 2009. The Army delayed the award due to Section 113 of the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009, (Public Law 110–417). Section 113 restricts obligation or expenditure of not more than 75 percent of the Fiscal Year 2009 funding until 30 days after the Assistant Secretary of Defense for Networks and Information Integration provides Congress a report on Army Tactical Radio Fielding Plans. The Assistant Secretary of Defense for Networks and Information Integration provided the report in April 2009.

Question. Is the $87M that was fenced in the FY09 Defense Appropriations bill included in this RFP award?

Answer. Yes. The funding will be released to the Program Management Office once the following two items are completed: (1) 30 days after Congress received the Army Tactical Radio Fielding Plan from the Assistant Secretary of Defense for Networks and Information Integration in April and (2) The Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (Public Law 110–329), page 244, provides that none of the funds in this Act shall be used for procurement of Single Channel Ground and Airborne Radio System (SINCGARS) radios until the Secretary of Defense certifies to the congressional defense committees that any such procurement of SINCGARS radios will use full and open competition to provide the best value for the Army radio requirements including consideration of multi-band, Joint Tactical Radio System (JTRS) solutions.

The Office of the Secretary of Defense has given the Secretary of the Army the responsibility to address this issue because the Army has responsibility for procuring the SINCGARS radio and this certification was provided to the Congressional Defense Committees in April.

Question. How many suppliers are eligible to compete for this RFP?

Answer. The RFP is open to all manufacturers that can supply a tactical radio meeting the minimal requirements listed in the RFP. The Army's market research indicated at least two potential suppliers.

Question. What is the Army's plan for acquiring Commercial off the Shelf (COTS) radios that can meet Operational needs per the FY07 GWOT directive?

Answer. The Army responded on June 21, 2007 to the FY07 GWOT language provided in House Report 110–60, page 126.

The Committee directed the Army report to the Congressional Defense Committees explaining the strategy to leverage available and qualified industrial capacity to produce the needed SINCGARS at a significantly faster rate.

The Army discussed the matter with ITT Corporation who at the time was under a competitively awarded contract to produce SINCGARS radios. ITT committed to increasing production up to 10,000 SINCGARS per month in order to meet Army fielding requirements. A copy of ITT's formal commitment to support this increased production capacity was enclosed with the original response. Therefore, the surge in ITT production capability met SINCGARS fielding requirements and significantly reduced delivery times of the needed radio systems.

The Army also conducted a market survey to determine if other qualified vendors could meet SINCGARS requirements to the specifications of the SINCGARS Operational Requirements Document (ORD). Only ITT was able to meet the full ORD requirements at that time.

[CLERK'S NOTE.—End of questions submitted by Mr. Boyd. Questions submitted by Mr. Murtha and the answers thereto follow:]

REDEPLOYING CONTRACTORS FROM IRAQ

Question. General Chiarelli, the Defense Department has a greater number of deployed contractors in Iraq than deployed Military servicemembers. How will you ensure that contractors will be redeployed proportionately to redeploying servicemembers? What is your schedule for redeploying contractors from Iraq?

Answer. The Department of Defense, U.S. Central Command, and to a lesser extent the Department of the Army, continually assess the Iraqi personnel requirement to ensure the appropriate personnel strength to accomplish the mission. Logistics planning is in full swing to weigh the requirements for contracted support during redeployment, considering declining troop strength as well as increased need for some services, for example transportation, base closure and remediation support, and property management. The timeline for contractor redeployment may not mirror that of the Warfighters and may not be proportional. Additionally, as troop numbers grow in Afghanistan, some contractors may shift rather than redeploy. Redeployment timelines for combat forces and contractors are not discussed in non-secure forums due to operational security.

MEDICAL CASUALTY EVACUATION TIMEFRAMES

Question. General Chiarelli, how long (in hours and minutes) has it taken to MEDEVAC personnel from Iraq to medical treatment facilities? How long (in hours and minutes) has it taken to MEDEVAC personnel from Afghanistan to medical treatment facilities? What is the MEDEVAC timeline goal? What is the Army doing to achieve MEDEVAC goals?

Answer. Army analysis (data from Jun 08–Dec 08) shows that the average time to evacuate a wounded Soldier to a hospital in Iraq is 45 minutes and the average time in Afghanistan is 1 hour and 20 minutes. Analysis continues, but preliminary numbers show an improving trend in OEF (during Oct 08–Dec 08 the average time was 1 hour and 11 minutes). The timeline standard for MEDEVAC is one hour. In fact, there is an ongoing joint effort to improve the MEDEVAC system to achieve the 1 hour standard. The Army, as part of this effort, has sourced a forward surgical team and four UH60 MEDEVAC helicopters/crews. The Air Force and the Navy have also provided additional assets as part of this joint effort. In addition, the Army will deploy an additional forward surgical team, a medical brigade command and control headquarters, and an additional 12-ship MEDEVAC company as part of a combat aviation brigade deployment. We expect that the employment of these assets will move the MEDEVAC time to less than 60 minutes in MND-East and South.

BACKLOG AT ANNISTON ARMY DEPOT

Question. General Chiarelli, please describe the depot maintenance backlog for equipment to be repaired at Anniston Army Depot (ANAD).

Answer. In order to provide a comprehensive response regarding equipment backlog at ANAD, we have verified our depot capacity and programs for critical systems at ANAD and the remaining four maintenance depots: Corpus Christi, Letterkenny, Red River, and Tobyhanna Army Depots. We continue to have ample capacity to meet Army requirements.

The few cases where our depots have not been able to meet the Army-directed production schedules have been the result of supply chain issues or lack of unserviceable assets, and not the capacity of our depots. For example, at Anniston, our slower-than-required production of M2 machine gun production during the first part of fiscal year 2009 (FY09) was the result of nonconforming parts in the supply system. Army Materiel Command, Defense Logistics Agency, Headquarters, Department of the Army and parts suppliers worked together to resolve these problems. Once acceptable parts were available in sufficient supply, ANAD was able to quickly increase its production of M2 machine guns from 400 per month in 1st Quarter FY09 to 700 per month to meet the Army requirements. An example of unserviceable asset shortfall is the M1114 HMMWV program at Red River Army Depot. Currently there is a shortfall of several hundred vehicles scheduled to be shipped from Southwest Asia that have not yet arrived, therefore, impacting the production schedule.

Our depots have the capacity to accomplish additional workload in all areas, especially considering the additional capability we have available through partnering arrangements and national maintenance contracts with original equipment manufacturers such as Oshkosh, Raytheon, and Boeing Aerospace Engineering.

INDIVIDUAL READY RESERVE

Question. General Chiarelli, how many times has the Army used the Presidential Reserve Call-up Authority over the past eight years? What is the period of obligation once a Ready Reserve service member has been called up?

Answer. Over the past eight years, the Army has used the Presidential Reserve Call-up Authority twice: once for operations in Kosovo and also for operations in Bosnia.

Ready Reservists are currently called to active duty pursuant to Title 10, US Code, Section 12302, for a period not to exceed 400 days: 365 days involuntary mobilization, plus 35 days authorized for out-processing and post-mobilization leave.

[CLERK'S NOTE.—End of questions submitted by Mr. Murtha.]

THURSDAY, MARCH 12, 2009.

ARMY AND MARINE CORPS FORCE PROTECTION

WITNESSES

LIEUTENANT GENERAL N. ROSS THOMPSON III, MILITARY DEPUTY TO THE ACTING ASSISTANT SECRETARY FOR ACQUISITION LOGISTICS AND TECHNOLOGY, UNITED STATES ARMY

LIEUTENANT GENERAL JAMES D. THURMAN, DEPUTY CHIEF OF STAFF, G–3/5/7, UNITED STATES ARMY

LIEUTENANT GENERAL GEORGE J. FLYNN, DEPUTY COMMANDANT, COMBAT DEVELOPMENT AND INTEGRATION, UNITED STATES MARINE CORPS

INTRODUCTION

Mr. VISCLOSKY. This morning the Committee will hold a hearing on force protection in the Army and Marine Corps.

We are pleased to welcome Lieutenant General James D. Thurman, the Deputy Chief of Staff, U.S. Army; Lieutenant General N. Ross Thompson III, Military Deputy to the Acting Assistant Secretary of the Army; and Lieutenant General George J. Flynn, Deputy Commandant for Combat Development and Integration, United States Marine Corps.

Also in attendance, but I am told by General Flynn not allowed to speak because he is a Notre Dame graduate, Brigadier General Michael M. Brogan, Commander of Marine Corps Systems Command, who is with us as well.

And I would be remiss at the beginning if I did not again congratulate General Flynn on Navy's recent victory over Notre Dame in football.

OPENING STATEMENT

Today we will explore a broad range of topics related to force protection, ranging from individual equipment, to MRAP trucks, to avoiding fratricide, to countering IEDs and snipers, to security of base camps.

Over the Thanksgiving break, Chairman Murtha visited Landstuhl Hospital in Germany and had the opportunity to talk to some of our soldiers and Marines hospitalized there. One of the conversations dealt with maintenance and recovery of the MRAP. During today's hearing, in addition to other items of interest, the committee wishes to address specifically maintenance and recovery, scheduling design change, and contracting of MRAPs. In addition, it has been suggested that the MRAP, as design and fielded for the fight in Iraq, may not be suited to fight in Afghanistan.

Gentlemen, we are looking forward to your opening statements. But first let me recognize my good friend, the distinguished rank-

ing member of the subcommittee, Mr. Young, for any remarks he may have.

REMARKS OF MR. YOUNG

Mr. YOUNG. Mr. Chairman, thank you very much.

And I want to again welcome our distinguished guests back. This is beginning to be a habit so far this year. But we are always happy to see you.

We are going to have a series of votes around 11 o'clock, which are going to probably interrupt severely the hearing. So I am going to forgo any opening statement in the interest of time so that we can hear the testimony of the distinguished witnesses.

Thank you, sir.

Mr. VISCLOSKY. Thank you very much, Mr. Young.

And, gentlemen, all of your statements will be entered into the record. And I believe, General Thompson and General Flynn, you have prepared remarks.

SUMMARY STATEMENT OF GENERAL THOMPSON

General THOMPSON. Well, Congressman Visclosky, Congressman Young, and distinguished members of the subcommittee, on behalf of both myself and General Thurman, thank you for the opportunity to discuss Army force protection programs.

Along with the Deputy Chief of Staff, G–3/5/7, I have a joint written statement that I will respectfully request be made part of the record for today's hearing.

Our highest priority is the protection of our warfighters in an operational environment that today is both ambiguous and unpredictable. Over the last 8 years, we have successfully adapted our institutional processes to expedite the development and delivery of the latest force protection equipment to our deployed forces.

With the support of Congress and the American people, the Army has invested heavily in new equipment and technologies to enhance soldier survivability and lethality. We recognize that our enemy is highly adaptive, and we established systems, enabled by your funding and support, to responsibly and rapidly procure equipment and promising technologies to protect the force.

Today's soldiers are better equipped and better protected than ever before. The Army's framework for force protection is a systems-of-systems approach that integrates layers of protection to reduce vulnerability to attacks. These layers—situational awareness, individual protection, vehicle protection, and countermeasures—are integrated through the development of appropriate tactics, techniques, and procedures based on lessons learned and rehearsed through realistic training.

As you know, today's battlefield has no front lines and poses threats throughout the entire area of operations. We have equipped our soldiers with precision lethality and advanced situational awareness systems required to defeat the asymmetric threats. We have developed and fielded extensive equipment for soldier survivability, including individual protection programs ranging from the advanced combat helmet, to life-saving body armor, to clothing that

allows our warfighters to adapt to varying mission requirements and environmental conditions.

MINE-RESISTANT AMBUSH-PROTECTED VEHICLES

Soldier survivability has also increased in the area of vehicle protection. The Army worked closely with the Marine Corps to field the Mine-Resistant Ambush-Protected vehicle, or MRAP, in record time. Presently we have over 9,000 MRAP vehicles in use in theater, providing enhanced crew protection and saving lives.

Our industry partners challenged the limits of technology, guiding off of our requirements, and evolved the MRAP vehicles from providing only improvised explosive device, or IED, protection to providing both IED protection and explosively formed projectile protection.

JAMMERS

In the area of countermeasures, all MRAP vehicles have CREW jammers integrated before deployment. "CREW" stands for "Counter Radio-controlled IED Electronic Warfare" jammers. We devised joint strategies to keep our current fleet of jammers relevant to the constantly evolving threat. And we firmly believe that the success of the CREW program has led to significant reduction in the radio-controlled IED threat.

Likewise, the counter-rocket artillery and mortar, or C-RAM, capability is an acquisition success, where joint efforts enabled the rapid development and fielding of a capability to detect, engage, and destroy in-flight rocket artillery and mortar rounds.

Soldier survivability has increased dramatically with the provision of force protection solutions. And we thank you all for your strong support of our efforts. Your commitment to our men and women in uniform is widely recognized throughout our ranks.

Sir, this concludes my opening remarks, and General Thurman and I look forward to your questions.

[The joint statement of General Thompson and General Thurman follows:]

RECORD VERSION

STATEMENT BY

LIEUTENANT GENERAL N. ROSS THOMPSON, III
PRINCIPAL MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY
FOR ACQUISITION, LOGISTICS AND TECHNOLOGY AND
DIRECTOR, ACQUISITION CAREER MANAGEMENT

AND

LIEUTENANT GENERAL JAMES D. THURMAN
DEPUTY CHIEF OF STAFF, G-3/5/7

BEFORE THE

SUBCOMMITTEE ON DEFENSE
COMMITTEE ON APPROPRIATIONS
UNITED STATES HOUSE OF REPRESENTATIVES

ARMY FORCE PROTECTION

FIRST SESSION, 111TH CONGRESS

MARCH 12, 2009

NOT FOR PUBLICATION
UNTIL RELEASED
BY THE COMMITTEE
ON APPROPRIATIONS

Introduction

Chairman Murtha, Congressman Young, and distinguished Members of the Appropriations Committee: Thank you for this opportunity to discuss Army force protection programs. We are pleased to represent Army leadership, the civilian and military members of the Army acquisition workforce, and the more than one million courageous men and women in uniform who have deployed to combat over the last seven years and who have relied on us to provide them with world-class weapon systems and equipment for mission success. The Army's top priority remains the protection of our warfighters, and we thank the Members of this Committee for your shared commitment to this goal. Your advice and guidance along with your steadfast support is recognized throughout our ranks and is deeply appreciated.

The global security environment is ambiguous and unpredictable. We are in the midst of a long war, the third longest in our Nation's history and the longest ever fought by our All-Volunteer Force. Our battlefield has no front lines and poses threats throughout the entire operational area. Aware of this threat, we have adapted our institutional processes to expedite the development and delivery of the latest force protection equipment to our deployed forces. We recognize that our enemy is highly adaptive, and we have established systems – enabled by your funding and support – to responsibly and rapidly procure equipment and promising technologies to protect the force.

It is important to understand that the Army's framework for force protection is a system-of-systems approach that integrates layers of protection. These layers – situational awareness, individual protection, vehicle protection, and countermeasures –

are integrated through the development of appropriate tactics, techniques, and procedures (TTPs), based on lessons learned, which are rehearsed through realistic training. Our warfighters in theater realize that force protection requires the integration and application of all these capabilities to reduce vulnerability to attacks in an asymmetric threat environment.

We face an adaptive enemy who works continually to identify and exploit our vulnerabilities. Our challenge is to identify and address these efforts through a combination of TTPs and materiel changes, and our progress is substantial. We have made major improvements in the system-of-systems we employ to protect the lives of our warfighters, as well as our processes for developing and fielding weapon systems and equipment.

System of Systems Approach to Force Protection

The Base Expeditionary Targeting and Surveillance System – Combined (BETSS-C) resulted from an urgent requirement for enhanced **situational awareness** and improved persistent surveillance in Iraq and Afghanistan. BETSS-C is comprised of surveillance sensors, closed circuit TV, Pan-Tilt-Zoom Cameras, Long Range Thermal Imagers, security monitoring stations and Mid-Range Thermals for see-in-the-dark capability as well as thermal signatures in light or zero light conditions up to three kilometers. This effort is in direct support of force protection and intelligence pattern analysis of our operating bases in OIF and OEF. The current validated requirements are to support more than 450 locations throughout OIF and OEF, including Joint Security Stations, Forward Operating Bases, and Combat Outposts. Fielding continues at rates of nine to 12 locations per month in OIF and 13 locations per month in OEF.

OEF has also requested additional (subject matter experts/trainer/maintainers/ operators) personnel to augment some of their smaller operating locations. The personnel are currently being trained and will begin to deploy to the theater this month. BETSS-C requirements are currently being reviewed and revalidated by U.S. Central Command.

Additional capability will be added to our force protection layered approach in the form of Unattended Ground Sensors (UGS). UGS is designed to provide a low-cost, network-enabled reporting system for situational awareness and force protection in urban and rural settings. Two major subgroups of sensing systems – Tactical-UGS and Urban-UGS – are used to perform mission tasks such as perimeter defense, surveillance, target acquisition, situational awareness, and early warning. Besides the current fielding of UGS in support of operational needs, the Future Combat Systems' UGS program has a capability that will be placed in current Army formations. Fielding is planned for 2011.

With regard to **individual protection**, the Army has fully matured the Rapid Fielding Initiative, providing an increasing array of state-of-the-art, individual and small unit protection equipment to our deployed forces. This program facilitates Soldier modernization in a systematic and integrated manner with an equipment list of 73 items that includes the Advanced Combat Helmet, night vision equipment, protective eyewear, hearing protection, and other essential, technologically advanced capabilities. Originally scheduled to be completed by the end of Fiscal Year 2007 (FY07), the Rapid Fielding Initiative program has been extended indefinitely because of its success in providing ongoing support to our warfighters in Iraq and Afghanistan.

The Army provides every Soldier in theater with Interceptor Body Armor (IBA), a centerpiece program for the Army that is saving lives every day. IBA is a modular design that provides protection against fragmentation and small arms ammunition. The current Army body armor provided to Soldiers – Improved Outer Tactical Vest (IOTV) equipped with Enhanced Small Arms Protective Inserts (ESAPI) plates – meets operational requirements and is proven both in rigorous testing and in combat to be the best body armor in the world.

The Army has continually improved its body armor over time. The current IOTV has three primary improvements: (1) a quick release, (2) less weight, and (3) more area coverage. The quick release allows removal of the body armor in case of an emergency, to avert drowning, or enable medical personnel ready access to an injured Soldier. In seeking the next generation of body armor, the Army continually collaborates with industry to meet Army requirements. For example, the Army sponsors open industry days and holds Soldier protection demonstrations to allow industrial base vendors to demonstrate their body armor products. In addition, the Army has research and development funds programmed in the Program Objective Memorandum for future developments of the next generation body armor.

The Army will procure 120,000 sets of X-Small Arms Protective Inserts (XSAPI) plates in 2009. These plates will be shipped to Kuwait as a contingency stock and will be available for use by the theater commander. Although XSAPI provides increased protection, we continue to work with industry to determine how we can make the inserts lighter to lessen our Soldiers' load without jeopardizing force protection.

Another critical component of protection for Soldiers is the Fire Resistant Environmental Ensemble (FREE), a multi-layered versatile, all climate system that allows combat vehicle and aircrew members to adapt to varying mission requirements and environmental conditions. FREE is designed to increase comfort and ergonomic efficiency and replaces legacy cold-weather clothing.

In the area of **vehicle protection**, the Army and U.S. Marine Corps have fielded, in record time, an entirely new family of vehicles providing enhanced crew protection – the Mine Resistant Ambush Protection (MRAP) vehicle. The requirements, procurement, and test and evaluation communities, along with the industrial base, have done an outstanding job in meeting the needs of our warfighters. In the last 15 months the Army has delivered more than 10,600 MRAP vehicles to Iraq, Afghanistan and Kuwait, of which nearly 9,400 are in operational use. Recently, we began executing our plan to cascade the oldest variants out of Iraq and into the training base. We expect these vehicles to arrive in the United States in April. During that time, we received insightful assessments from commanders and Soldiers regarding MRAP performance, capabilities, and recommended improvements. Our industry partners have challenged the limits of technology, pursuant to our requirements, and evolved MRAP vehicles from providing only Improvised Explosive Device (IED) protection to providing IED and Explosive Formed Projectile (EFP) protection. We are working with our industry partners to develop and rapidly field a smaller, lighter, more maneuverable IED/EFP protected vehicle.

The next evolution of MRAP is the MRAP-All Terrain Vehicle (M-ATV). A Request for Proposal was released in December 2008 and evaluation of vendor

proposals is underway. One of the Army's equipping tenets is to provide our Soldiers with the best available equipment and capabilities that technology will allow. The MRAP vehicle program is a resounding success. This family of vehicles has dramatically enhanced survivability for Soldiers involved in IED and EFP engagements, not only in saving the lives of our warfighters, but in many cases allowing them to walk away unharmed from horrendous explosions. We thank the Members of this Committee for your support for this vital program. We could not have done this without your commitment to protect our Soldiers.

We continue to send Up-Armored High Mobility Multipurpose Wheeled Vehicles (UAH) into theater and are upgrading the vehicles' ability to protect our Soldiers. Initiatives such as Fragmentation Kits 6 and 7 are being procured for installation on UAHs to counter IED and sniper attacks. At the same time, we are investing in a myriad of technologies that will increase the platform's capabilities to engage the enemy. Systems such as acoustic gunshot detection systems, Remote Weapons Stations, and Long Range Advanced Scout Surveillance System are intended to increase the ability of our Soldiers to identify and engage the enemy.

In other areas of our Tactical Wheeled Vehicle (TWV) fleets, we are also increasing Soldier protection levels. In the next few months, we will field the first of approximately 6,000 medium vehicles built in line with our Long Term Protective Strategy (LTPS). These vehicles will be capable of easily accepting armor kits that provide better protection when needed and allow removal of the kits when the protection is not needed. We are working with the U.S. Army Training and Doctrine Command to finalize LTPS and ensure that the TWV fleet armoring requirements reflect the latest

lessons learned. LTPS trucks will be fielded to the next deploying units to ensure that Soldiers receive the most capable armor protection during their deployments. Older trucks are being moved to repair facilities to be reset for reuse within the force in order to ensure Soldiers are equipped with the systems they need based on mission requirements.

The Joint Light Tactical Vehicle (JLTV), a family of vehicles with companion trailers capable of performing multiple mission roles, will replace the HMMWV starting in 2015. JLTV is a Joint Army/U.S. Marine Corps and U.S. Special Operations Command program designed to provide protected, sustained, networked mobility for personnel and payloads across the full range of military operations. JLTV will require a design that supports inherent and supplemental armor, scalable to mission.

The Army is fielding the XM153 Common Remotely Operated Weapon System (CROWS) to further protect gunners while still enabling them to engage the enemy with their crew-served weapons. CROWS is a remote weapon station capable of mounting the M2 (.50 caliber), MK19 (40mm grenade), M240B (.308 caliber), or M249 (.22 caliber) Machine Gun. It provides the operator with the ability to control the system from within the protection of an armored vehicle and to engage targets with a high degree of accuracy during day or night while stationary or moving. Fielding is ongoing in Iraq. The first vehicles for Afghanistan with CROWS are planned to be shipped this month with a fielding date of May 2009.

Another layer of force protection is provided by the use of passive and active **countermeasures**. The Army has continued to support both Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) with Counter Radio Controlled IED

Electronic Warfare (CREW) jammers. More than 98 percent of all the outside the wire armored vehicles in OIF have a CREW system installed. OEF is currently receiving more jammers to support the deployment of additional units and equipment. Additionally, all MRAP vehicles have had CREW jammers integrated stateside before deployment. The Army has devised strategies to keep its current fleet of jammers relevant to a constantly evolving threat, and firmly believe that the success of the CREW program has lead to a significant reduction in the Radio Controlled IED threat.

The Counter Rocket Artillery and Mortar (C-RAM) capability is an acquisition success story where Joint efforts enabled the rapid development and fielding of a capability to detect, engage and destroy in-flight rocket, artillery, and mortar rounds. This capability did not exist prior to September 11, 2001. The Army is currently considering the transition of the C-RAM capability to a program of record.

Conclusion

Soldier survivability has increased dramatically with the provision of force protection solutions, and we thank you for your strong support for our efforts. As previously mentioned, your deep and abiding commitment to our men and women in uniform is widely recognized throughout our ranks. American Soldiers – adaptive, competent, and infused with the Army's values and warrior ethos – continue to perform magnificently as they fight and win our Nation's wars. As we move forward, the Soldier remains the Strength of the Nation. We look forward to our continued work with this Committee and to ensure we are responsive to your questions.

Mr. VISCLOSKY. General Flynn.

SUMMARY STATEMENT OF GENERAL FLYNN

General FLYNN. Mr. Chairman, Congressman Young, and members of the Committee, it is again an honor and privilege to be with you all today. I appreciate the opportunity to discuss our force protection requirements with you today.

Make no mistake about it, taking care of our Marines in harm's way is our number-one priority. The Marine Corps's approach to force protection is balanced and integrated. The three key parts are training; better tactics, techniques, and procedures; as well as equipment.

This approach is needed to make sure that we maintain the initiative in dealing with a thinking and adapting enemy, that we do not rely on a single approach that limits our operational flexibility and effectiveness, and that we maintain both our individual and operational agility across the range of military operations.

Additionally, we are always searching for and evaluating new concepts and technologies to see if they can provide us with operational advantage and enhanced force protection. And we field them as rapidly as we can.

I look forward to answering your questions, and I thank the Committee for all its support that it has provided us.

[The statement of General Flynn follows:]

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THE HOUSE APPROPRIATIONS
COMMITTEE
SUBCOMMITTEE ON DEFENSE

STATEMENT OF

LIEUTENANT GENERAL GEORGE J. FLYNN

DEPUTY COMMANDANT OF THE MARINE CORPS
(COMBAT DEVELOPMENT AND INTEGRATION)

BEFORE THE

HOUSE APPROPRIATIONS COMMITTEE

SUBCOMMITTEE ON DEFENSE

CONCERNING

MARINE CORPS FORCE PROTECTION EQUIPMENT

ON

MARCH 12, 2009

NOT FOR PUBLICATION
UNTIL RELEASED BY
THE HOUSE APPROPRIATIONS
COMMITTEE
SUBCOMMITTEE ON DEFENSE

Lieutenant General George J. Flynn

Deputy Commandant
for
Combat Development and Integration

Lieutenant General Flynn graduated from the United States Naval Academy in 1975. He holds a Master of Arts Degree in International Relations from Salve Regina College, a Master of Arts Degree in National Security and Strategic Studies from the Naval War College, and a Master of Science Degree in National Security and Strategy from the National War College. He is a Distinguished Graduate of the College of Naval Command and Staff and the National War College.

Lieutenant General Flynn's command assignments include: Commanding Officer, HQ Battery, 2nd Battalion, 12th Marines; (1979-1980); Commanding Officer, L Battery, 2nd Battalion, 12th Marines (1980); Commanding Officer, P Battery, 5th Battalion, 10th Marines (1984-1985); Commanding Officer, 5th Battalion, 10th Marines (1992-1993); Commanding Officer, Officer Candidates School (1999-2001), Commanding General, Training Command (2002-2004), Commanding General, Training and Education Command (2006-2007). Commanding General, Marine Corps Combat Development Command (2008-).

Lieutenant General Flynn's staff assignments include: Forward Observer, Fire Direction Officer, Battery Executive Officer and S-4 A, 2nd Battalion, 11th Marines (1976-1979); Officer Selection Officer, Manchester, New Hampshire, (1981-1984), Operations Officer, 5th Battalion, 10th Marines (1985-1986), Plans Officer, Plans Policies and Operations Department, Headquarters Marine Corps (1987-1989); Junior Aide-de-Camp to the Commandant of the Marine Corps (1989-1991); Assistant Fire Support Coordinator, 2d Marine Division (1991-1992); Future Operations Officer, III Marine Expeditionary Force (1994-1995); Military Assistant to the Executive Secretary to the Secretary of Defense (1995-1997); Military Fellow, Council on Foreign Relations (1997-1998); Head, Strategic Initiatives Group, Headquarters Marine Corps (1998-1999); Military Secretary to the Commandant of the Marine Corps (2001-2002); Deputy Commanding General, Training and Education Command (2002-2004). Chief of Staff and Director, Command Support Center, United States Special Operations Command (2004-2006). Deputy Commanding General Multi-National Corps-Iraq (2008).

Introduction

Chairman Murtha, Congressman Young, and distinguished members of this Subcommittee, I appreciate and am honored to appear before you today. Protecting Marines is a concern we all share, and I appreciate the opportunity to discuss Marine Corps force protection equipment. Marines and their families understand and appreciate all the support the Congress has provided in ensuring their well being. On their behalf, I want to thank you for your past support, and we look forward to working together to support our Marines as they remain engaged in combat operations in OPERATION IRAQI FREEDOM, OPERATION ENDURING FREEDOM, and other contingencies.

Lightening the MAGTF

Safeguarding Marines is one of our highest priorities and is one of our most challenging. The goal of our research and development in armoring technologies is to increase the effectiveness of armor while reducing weight for both individual protection as well as vehicle armoring. The bottom line is that the focus on armor as the principal means of protecting our force is making us too heavy. Our business is a deadly one and one that we don't take lightly but we have to view force protection as more than armor if we are ever to lighten the MAGTF. In fact, force protection of the MAGTF is also accomplished through our maneuver tactics, techniques and procedures and through increased battle space awareness. Lightening the MAGTF makes us faster and more agile; ultimately, making us more effective and deadly to the enemy. Speed and maneuverability inherently provide a measure of force protection, particularly when combined with proper training. We achieve that awareness through integration of persistent and responsive intelligence, surveillance, and reconnaissance delivered by our reconnaissance forces, by unmanned aerial sensors and through other sensor and electronic technologies. These systems do not eliminate risk but they do provide an additional layer of protection through battle space awareness.

We are developing policies and acquisition practices for our future equipment that will make it more modular and scalable to allow us to increase and decrease armor protection and its associated weight according to the commander's assessment of mission requirements and threat.

This means that there will be times in the future when Marines and vehicles are armored significantly less than they are today, but mobility and speed will increase by removing some armor. These decisions will not be taken lightly but they are absolutely necessary to enable the accomplishment of our mission. We must ensure that our commanders in the field have flexibility and the ability to tailor equipment sets to match the threat, the operating environment, and demands of the mission at hand.

The expeditionary nature of the MAGTF demands a force that is capable of the rapid movement of combat forces, whether by surface ships and amphibious landing craft, aircraft, vehicles, or on foot. Today's MAGTF is many times more lethal and more multi-mission capable than it was even a decade ago and while some of the equipment used by individual Marines is lighter and more effective than the equipment it replaced we are still a long way away from lightening the load Marines are burdened to carry. Of particular concern is armor, both personal protective armor as well as armoring of combat vehicles. A relatively recent and essential trend, increasing armor on Marines and their vehicles, born from operations in Iraq, threatens to erode our expeditionary capabilities and reduce the effectiveness of our forces. The protection of our Marines is paramount and while body and vehicle armor are life savers other methods for protecting our Marines are equally as important. Our protection philosophy must include training in personal protective measures, maneuver tactics, techniques and procedures and training our leaders in personal protective measures that allow flexibility and protection scalability. Our commanders need the flexibility to adjust protection levels as the situation dictates and provide scalability of personal protection equipment, both personal and vehicular, that provides levels of protection that reduce the burden on our personnel and equipment.

Ground Mobility

The evolving threat environment requires proactive management of tactical wheeled vehicle programs in order to provide Marine warfighters with the most well protected, safest vehicles possible given technological limitations. Force protection remains a priority for the Marine Corps. We have fielded a Medium Tactical Vehicle Replacement (MTVR) Armor System for the MTVR, Fragmentation Armor Kits for the High Mobility Multipurpose Wheeled Vehicles (HMMWV), Marine Armor Kits (MAK) for the Logistics Vehicle System (LVS), Mine Resistant Ambush Protected (MRAP) vehicles, and starting this fiscal year we will begin fielding Logistics Vehicle System Replacement (LVSR) vehicles that include a removable armor kit. As

we face continuous challenges, we strive to stay ahead of the threat. To this end, we have developed increased force protection upgrades to the MRAP vehicles and the Medium Tactical Vehicle Replacement Armor System, developed safety upgrades for the HMMWVs, and developed improved armor for the Logistics Vehicle System. We will continue to work with the Science & Technology community and sister Services to develop and apply technology to address force protection requirements. Your support for our force protection efforts has been overwhelming. We thank you and ask that Congress continue their life-saving support in the coming years.

Our plan for future tactical mobility is to replace the venerable Amphibious Assault Vehicle (AAV) and the family of High Mobility Multipurpose Wheeled Vehicles (HMMWVs). The design and capabilities of our future tactical combat vehicles are informed and guided by our amphibious and expeditionary nature, by lessons learned from combat operations and by close partnership with industry. Each has helped us to understand technical requirements and make better decisions during system development. The vehicle designs must achieve balance in what we refer to as the iron triangle: protection, payload, and performance. Our future tactical combat vehicle fleets must provide the commander with balanced capability- vehicles should be adequately protected, yet maneuverable and functional across the range of military operations. Where speed, tactical maneuverability, environmental and terrain considerations dictate the most important capabilities needed in our vehicles, we will carefully consider the tradeoffs in conventional heavy armor protection versus the operational requirements for performance. These tradeoffs are not taken lightly and they are done with full consideration that our Marines will be taking the vehicles into harm's way. Where possible, we are defining requirements for our vehicles that include scalable protection, meaning that it will be possible, through kitted armor applications to adjust the level of protection as dictated by the threat condition. We anticipate that as technology improves, we will be able to achieve greater degrees of ballistic and explosive protection with lighter materials. The acquisition objectives for our tactical vehicles are based on maintaining our current infantry lift capacity into the future and on restoring our payload capacity throughout the rest of the Marine Corps. In order to do that we will field the Expeditionary Fighting Vehicle (EFV) and the Marine Personnel Carrier (MPC) and we will begin replacing selected HMMWVs with the family of Joint Light Tactical Vehicles (JLTVs).

Expeditionary Fighting Vehicle (EFV). The EFV provides the Marine Corps and the nation with our only self-deploying, tracked, amphibious operations capable, fighting vehicle and is our Commandant's number one acquisition priority. The vehicle's design will permit it to carry 18 combat-loaded Marines ashore from ships positioned 25 or more nautical miles off shore at a speed of 20-25 knots and a range of 65 nautical miles ship to shore. The EFV's capability provides Amphibous ships with maneuver space for increased force protection for the fleet. Its ability to conduct high speed maneuver at sea as well as on land, combined with its weapons systems, communications suite, and protective systems make it a highly survivable and lethal capability. The EFV is armor protected to withstand 14.5mm impacts from 300 meters and with the addition of appliqué armor 155mm fragmentation penetration from 50 feet. It has a chemical overpressure system to protect the Marines on board against NBC attack. The EFV will be built in two configurations. The command and control variant will support and enable infantry regimental and battalion command and control. The personnel variant will carry a reinforced rifle squad and 3-man crew. The program completed critical design review in December 2008 and is on schedule to begin Low Rate Initial Production in 2012. The acquisition objective is 573 vehicles.

Joint Light Tactical Vehicle. This is a Joint Marine Corps/Army program with the Army as the lead Service for acquisition. The JLTV family of vehicles will be designed to replace multiple configurations of the current family of HMMWVs. The Marine Corps' initial acquisition objective is 5500 vehicles but the final objective could be 25,000 or more to facilitate replacement of all HMMWVs in our inventory. As the Marine Corps's light utility vehicle it will be required to support multiple mission roles from command and control, to cargo and troop carrying, to specialized ambulance and shelter carriers. Several variants of the JLTV will be required to be externally transportable by Marine Corps Heavy Lift CH-53 helicopters and that requirement will define maximum allowable weights. The JLTV family of vehicles will have scalable levels of protection consisting of a base armor capability and several designed safety and protection capabilities as well as kitted, add-on armor. The basic vehicle design will account for the heaviest anticipated payloads including armor kits to permit the vehicle to retain its all-terrain mobility capabilities even when fully loaded.

Marine Personnel Carrier (MPC). The MPC will be a multi-wheeled, armored personnel carrier designed to operate across the range of military operations but focused on an irregular warfare operating environment characterized by operations in constrained and urban terrain. Required to carry 8-10 combat loaded Marines and 2-man crew, the MPC will enable high-speed land maneuver as well as substantial ballistic protection to embarked Marines. It is scheduled to begin Engineering, Manufacturing and Development in 2010, with initial operational capability in 2015. The acquisition objective is approximately 630 vehicles.

Mine Resistant Ambush Protected (MRAP) Vehicles. Mine Resistant Ambush Protected (MRAP) vehicles are designed to protect vehicle crew and passengers from mine blasts and fragmentary and direct fire weapons. They are designed with a "V" shaped hull and are employed to protect against the three primary kill mechanisms of mines and improvised explosive devices – fragmentation, blast overpressure, and acceleration. The Marine Corps is executing this joint urgent requirement to provide as many highly survivable vehicles to theater as quickly as possible. In November 2008, the Joint Requirements Oversight Council established a new 16,238-vehicle requirement for all Services and Special Operations Command (SOCOM). The current Marine Corps requirement of 2,225 vehicles supports our ongoing theater operations and home station training. As of 27 January 2009, 16,230 vehicles are under contract with over 15,000 accepted by the government and over 11,200 fielded in theater. Our Marine Corps requirement was satisfied in June 2008.

The Marine Corps is supporting the Central Command (CENTCOM) Joint Urgent Operational Need, for a lighter, more agile vehicle better suited to the rugged environment in OPERATION ENDURING FREEDOM. We are aggressively executing an acquisition strategy to procure an MRAP All Terrain Vehicle (M-ATV). Submitted proposals are currently under review and the evaluation will include assessments of production representative vehicles. The Marine Corps is conducting the necessary analysis to establish our specific vehicle requirements for the MRAP-All Terrain Vehicle.

Up-Armored HMMWVs. Life cycle management of HMMWVs will continue to be a focus area due to their ubiquity and expeditionary capability. Safety modification kits (3 point seat

belts, automatic fire sensing and suppression systems, gunner's restraints and intercoms) requested by the warfighter have been shipped to theater for installation. Installations were completed in February 2008. Production units of 400 amp alternator kits required to power Counter IED jammers and other electronics are targeted to be installed in the beginning of 2009. We will continue to work with the Army to assess additional upgrades, particularly related to armor and the suspension system. We are currently evaluating the Army's Vehicle Emergency Escape (VEE) Windshield kit, which allows Marines to quickly exit the HMMWV in the event of a rollover.

Expanded Capacity Vehicles. The Expanded Capacity Vehicle (ECV) is the latest configuration for the HMMWV fleet. The Expanded Capacity Vehicle increased the gross vehicle weight to 12,100 pounds, and has a more powerful turbo-charged engine, upgraded suspension and integrated air conditioning system. Additionally the Expanded Capacity Vehicles are designed to accept armor kits, installed either at the factory or at organic maintenance facilities.

All new deliveries of Expanded Capacity Vehicle configurations (M1151, M1152 and M1165) to the Marine Corps are manufactured as armored vehicles and will have FRAG Kits 2 and 5 level capabilities integrated. FRAG Kit 2 is designed to enhance ballistic protection in the front part of the vehicle around the driver and A-driver wheel-wells. FRAG Kit 5 is designed to degrade improvised explosive device effects and reduce armor debris that results from overmatch.

Logistics Vehicle System Replacement (LVSR). The Logistics Vehicle System Replacement (LVSR) will replace the current Marine Corps aging heavy-tactical wheeled vehicle, the Logistics Vehicle System (LVS). As the Marine Corps' heavy-tactical distribution system, the LVSR Cargo variant will transport bulk liquids (fuel and water); ammunition; standardized containers; bulk, break bulk, palletized cargo, and bridging equipment. The LVSR Wrecker variant will perform heavy wrecker/recovery missions, while the LVSR Tractor variant will tow heavy engineer equipment and combat vehicles with the M870A2 40 ton Medium Heavy Equipment Trailer (MHET). All LVSR vehicles will include a base "A" armor kit, with capability to accept add-on "B" armor kits. LVSR cargo met or exceeded all survivability requirements in extensive live fire testing. LVSR cargo vehicles with armor kits will begin

fielding in FY09 to Afghanistan, as well as to CONUS and OCONUS MEF locations, training schools, and Maritime Prepositioned Shipping.

Mine Rollers. We are also fielding mine rollers to our Marines. These systems are designed to protect convoys from the effects of pressure-plate activated mines and victim initiated improvised explosive devices. The Lightweight Mine Roller system can be mounted on a variety of vehicles, including High Mobility Multipurpose Wheeled Vehicles, Medium Tactical Vehicle Replacements, and Light Armored Vehicles. It provides full-width protection coverage for the host vehicle.

Medium Tactical Vehicle Replacement (MTVR) Armor System (MAS) For our Medium Tactical Vehicle Replacement 7-ton trucks, we developed what is known as the Medium Tactical Vehicle Replacement Armor System (MAS). This armor system is a permanent modification to our Medium Tactical Vehicle Replacement fleet. It is designed for the life of the vehicle (twenty-one years). The Medium Tactical Vehicle Replacement Armor System is capable of withstanding small arms fire, improvised explosive devices, and mines. It provides complete 360 degree protection, as well as overhead and underbody protection for the cab occupants, and includes upgraded suspension, A/C system, removable armored personnel carrier (with ballistic glass), and machine gun mounts.

The Medium Tactical Vehicle Replacement Armor System is installed in all Medium Tactical Vehicle Replacement variants in Iraq and Afghanistan. We have continued to improve the Medium Tactical Vehicle Replacement Armor System in response to Urgent Universal Needs Statements (UUNS) – adding increased underbody blast protection, fuel tank fire protection kits, and 300 amp alternator kits (for powering Counter Improvised Explosive Devices (CIED), etc.). Every Medium Tactical Vehicle Replacement that leaves the FOB is equipped with the Medium Tactical Vehicle Replacement Armor System. The latest upgrade to the Medium Tactical Vehicle Replacement Armor System incorporates a removable cab roof to support Maritime Prepositioned Shipping requirements.

Vehicle Armoring in Closing

We have direct day-to-day communications with our U.S. Army counterparts to coordinate armoring strategies for our ground vehicles. We are committed to aggressively evolving our equipment to changing threats. Our ability to rapidly modify our vehicle armoring systems is a testament to this commitment. The following chart depicts the current state of our vehicle armoring efforts as of 25 January 2009.

MARCENT Current Vehicle Armoring Posture

as of 25 January 2009

(for official use only)

Since August 2004 all Marine Corps vehicles operating outside the FOBs have been at Level II or better armor protection.

	Vehicle Systems in CENTCOM AOR	OIF O/H	OEF O/H	HOA - Bahrain O/H	Total	Level I	Level II	Level III	Total Unarmored Vehicles not Leaving FOBs
	M1114	1917	158	0	2075	2075			
LTV	HMMWV	544	48	41	633	0	1873	9	10
MTV	5-ton	56	0	0	56	0	56	0	0
	MTVR	976	0	0	976	890	86	0	0
HTV	LVS	226	0	0	226	0	226	0	0

Level I: A wheeled vehicle that is manufactured as an armored vehicle
Level II: HQDA and Marine Corps approved Add-on-Armor (AoA) kits
Level III: Hardening of vehicles through fabricated armor (HQDA) approved steel

LTV: Light Tactical Vehicle
MTV: Medium Tactical Vehicle
HTV: Heavy Tactical Vehicle

ISR

Marine Corps Persistent ISR (P-ISR) is an integrating concept designed to enhance intelligence planning and collection. Under development within the construct of the Marine Corps Intelligence, Surveillance, and Reconnaissance - Enterprise (MCISR-E), P-ISR will encompass materiel and non-materiel solutions, traditional and non-traditional ISR collection capabilities (ISR, NTISR), and the subsequent integration of data into intelligence products supporting the decision-making process across all staff functions. Our objective end state for P-

ISR is the seamless integration of ground and airborne sensor data, enabling the MAGTF Commander to sense, detect, identify, and track threat and other activities in near-real-time and without interruption. USMC P-ISR capabilities are being developed and assessed to address three primary geographic areas of the operating environment: point targets, route security, and area coverage. The MAGTF C2 family of systems will provide the interfaces necessary to integrate capabilities into combat operations centers and small unit C2 nodes.

Currently, our focus is on providing commanders capabilities that enhance their security posture and expand the area over which they have situational awareness. As part of P-ISR support to Force Protection, we deployed the Ground Based Observation and Sensing System (GBOSS). GBOSS provides persistent surveillance of the area outside forward operating bases. For areas of interest within restricted terrain, we are developing a Micro-terrain Sensing System (MTSS) designed to provide full-motion video and still photography. In the air, based upon successes and lessons learned with the manned Angel Fire program in Iraq, we are pursuing better, more cost effective solutions. In cooperation with the Air Force and the Office of Naval Research, we are developing a wide area coverage payload for our organic unmanned aircraft system, SHADOW, that will include automated tools for the detection of anomalous behavior within the field of view. We also intend to leverage other Service's airborne initiatives such as TASK FORCE ODIN and PROJECT LIBERTY. To better provide combat information and intelligence to the lowest tactical level, we implemented the Company Level Intelligence Cell (CLIC) as part of an Enhanced Company Operations concept. Implementation of the CLIC has also provided the infantry company commander an organic ability to develop situational awareness and intelligence products for his area of operations and subsequently feed that information to higher headquarters. These capabilities, coupled with our current suite of tactical sensors providing imagery, signals intelligence, human intelligence, and measurement and signature intelligence, provide the commander an ability to maintain a greater awareness of his battle space. Our ability to selectively and intelligently feed sensor data to our lower tactical units will be critical to our ability to sustain and inform small unit actions across large operating areas such as Afghanistan.

As we move ahead with sensor development across the battlefield, we continue to pursue the ability to more comprehensively integrate battlefield sensors toward the mutual cueing of

ISR and NTISR sensors against high priority information requirements and the integration of data for sharing within and external to the MAGTF. These capabilities will be designed to make sensor data rapidly available across the MAGTF and within the larger joint community. Marine Corps Systems Command, in collaborative efforts with the Office of Naval Research, is furthering our ability to integrate disparate sensors with experimentation in Empire Challenge 2009, scheduled for this summer.

Force Protection Equipment and Initiatives

Counter Remote-Controlled Improvised Explosive Device Electronic Warfare (CREW) – High Power Jammers. During 2005, radio-controlled (RC) devices became the most deadly triggering mechanisms for Improvised Explosive Devices (IED). In recognition of that fact, in June 2005 the Commandant of the Marine Corps directed the Marine Corps Systems Command to find a rapid means to counter this threat. Working with the Joint IED Defeat Task Force (now JIEDDO), we immediately embarked on a world-wide search for a solution. By April 2006, we began fielding jamming systems to counter the RCIED threat.

Today, we have a significant number of Counter Radio-Controlled Improvised Explosive Device Electronic Warfare (CREW) systems in theater and protecting Marines. Every Marine vehicle that travels outside of operating bases is protected by a CREW system that counters the RCIED threat.

In August 2008, the Marine Corps began upgrading current CREW systems, Chameleon and Hunter, to counter emerging threats. The upgrades provide an expanded threshold frequency range. Upgraded systems will be interoperable with currently fielded CREW systems. The CREW Vehicle/Receiver Jammer has been identified as the next iteration of CREW system for the Marine Corps. Our CREW systems will continue to evolve to meet or stay ahead of the threat.

Ground Based Operational Surveillance System (GBOSS). To provide commanders with increased situational awareness to counter insurgent activities and the threat of improvised explosive devices (IED) a persistent ground based surveillance capability is required at the battalion and company level. In response, the Marine Corps has fielded the Ground Based

Operational Surveillance System (G-BOSS). This system consists of two electro-optic, infra-red cameras, a ground surveillance radar, and unattended ground sensors. Thirty-three G-BOSS systems were delivered in FY07, 78 systems in FY08, and 13 systems in FY09 to support Marines in OPERATION IRAQI FREEDOM

In August 2008, MARCENT submitted a request for an expeditionary "G-BOSS like" capability for persistent surveillance in support of OPERATION ENDURING FREEDOM. The request is for 22 mobile, scalable, lightweight systems to be used at combat outposts and temporary tactical locations. The Cerberus long range and portable systems were identified as an acceptable materiel solution. Deliveries of these systems will begin to arrive within the next 45 days. These systems have similar operational capabilities as the G-BOSS, however, the increased mobility and scalability of these systems will enable personnel to tailor their employment options to meet the rugged, remote terrain of Afghanistan.

Military Working Dogs. Military Working Dogs have been an asset to the Marine Corps since World War II. Today, there are six varieties of explosive-detecting Military Workings Dogs in the Marine Corps including the Explosive Detector Dog (single purpose), Patrol/Explosive Detector Dog (dual purpose), Combat Tracker Dog and Specialized Search Dog. There is also the IED Detector Dog, which will remain a "just-in-time" capability as a result of an Urgent Universal Needs Statement. Unlike other Military Working Dogs, Specialized Search Dogs and IED Detector Dogs do not need a Military Police Marine; they are handled by infantry Marines. All of these dogs provide Marines with the ability to prevent attacks, explosions, and unnecessary casualties. IED Detector Dogs should be particularly beneficial in Afghanistan, where the rugged terrain often requires dismounted patrolling. Two Battalions are currently training with 26 IED Detector Dogs in preparation for their Afghanistan deployments.

Biometrics. In 2003, Marine Commanders requested biometric capabilities for operations in Iraq and Afghanistan. The primary solution fielded in response to these urgent needs was the Biometric Automated Toolset (BAT). Four hundred fifty seven BAT systems have been fielded to Marines in OIF and OEF, and the device is used widely by our Army partners. The employment of BAT has assisted Marines in positively identifying an increasing number of significant Persons of Interest or High Value of Individuals over the past several years. The

BAT system has assisted Marines in detaining IED suspects/terrorists after matching latent fingerprints from Sensitive Site Exploitation materials collected from IED components or from weapons. Marine's aggressive employment of biometric systems has restricted the enemy's freedom of movement appreciably aiding in the disruption of enemy operations.

Explosive Ordnance Disposal (EOD). In response to lessons learned from current operations, we have increased our Explosive Ordnance Disposal (EOD) forces from 317, in Fiscal Year 2004, to 732 during Fiscal Year 2010. With the proliferation of sophisticated trigger mechanisms being employed in IEDs, coupled with future threat assessments with regards to Weapons of Mass Destruction, the increased Marine Corps EOD organizational structure is presently being evaluated to better leverage this capability across the full range of military operations. This evaluation may call for a relocation of the Marine Corps' EOD capability. EOD technicians are the only personnel trained, organized and equipped to render safe, neutralize or dispose of IEDs. The Marine Corps' EOD community will increase support in Afghanistan in the near future.

Personal Protective Equipment

The wartime environment constantly changes and no one is better suited to determine what is the most effective in any given situation than the warfighter. Therefore, we provide solutions that can be configured to meet varying levels of threat. In the case of body armor, we provide every Marine with a modular ballistic body armoring system. Operational commanders are then able to determine what specific equipment their Marines will wear based upon specific mission requirements and environmental conditions.

Evolution of Tactical Vests

The foundation for our modular ballistic body armoring system is the Interceptor Body Armor System. Combat operations over the last few years have highlighted a need for improvements in our protective vest system. Therefore, we have transitioned from the Outer Tactical Vest to a new, more capable Modular Tactical Vest (MTV). The MTV provides greater coverage over the OTV, but adds nearly four pounds of additional weight (33.5 lbs versus 29.9 lbs). We are currently in the design phase for the development of an Improved Modular Tactical

Vest (IMTV). The soft and hard armor within the personal protective vests issued by the Marine Corps and the Army are the same and provide the same level of fragmentation and ballistic protection and are similar. The vests are similar, but not identical. The Marine Corps collaborated with the Army throughout the acquisition process to include sharing of test and evaluation data.

The Modular Tactical Vest accommodates use of our existing Enhanced Small Arms Protective Inserts and our Enhanced Side Small Arms Protective Insert plates. These are the same armor plates used by the Army and will continue to be the same as we make improvements to the Modular Tactical Vest.

The Marine Corps has teamed with engineers from the U. S. Army's Research, Development and Engineering Center in Natick, Massachusetts to address the areas of concern identified by Marines who wore the Modular Tactical Vest and to design an Improved Modular Tactical Vest that does the following:

- Mobility: Reduce Weight, Maximize torso/shoulder mobility to the greatest extent possible, and improve load distribution and weight bearing capabilities
- Comfort: Reduce soft armor overlap and bunching; and make cummerbund adjustments
- Accessibility: Reduce donning/doffing concerns, improve cummerbund flap closure
- Weapons Employment: Facilitate stock weld
- Modularity/Scalability: Facilitate the commander's discretion/flexibility for determining overall system weight and level of protection based on the prevailing threat and mission requirements

The acquisition objective for the Improved Modular Tactical Vest is 108,000 systems. A Request for Proposal is planned for release sometime this summer, 2009. Deliveries are planned to begin after a competitive award, with anticipated completion of deliveries in 2010. At the same time, we are conducting collaborative planning on the Next Generation personal protective vests with our sister Services.

Scalable Plate Carrier. The Scalable Plate Carrier is a lighter vest (25.4 lbs) that provides a body armor capability with greater mobility and reduced thermal stress in high elevations, thick vegetation and tropical environments than that provided by the Modular Tactical Vest. It allows

greater mobility and reduced thermal stress while maintaining direct fire protection. Both vests use Enhanced Small Arms Protective Inserts (E-SAPI) and Side SAPI plates and provide the best protection available against a wide variety of small arms threats. E-SAPI plates weigh 13 pounds for the large size, and the Side SAPI plates weigh 4.6 pounds. We recently fielded approximately 14,000 Scalable Plate Carriers. Coupled with the Modular Tactical Vest, the Scalable Plate Carrier provides commanders options to address various mission/threat requirements.

Scalable Plate Carrier feedback from Marine combat veterans has been clear and positive. Marines have welcomed protective equipment which provides identical ballistic protection at a lower weight, improving mobility in combat. The acquisition objective has been increased to approximately 65,000 plate carriers. Planned improvements to the Improved Scalable Plate Carrier (ISPC) include a cummerbund interoperable with the Modular Tactical Vest/Improved Modular Tactical Vest and enhancements to the shoulder straps to simplify donning/doffing.

Lightweight Helmet. We are committed to providing the best head protection available to our warfighters. The Lightweight Helmet provides the best performance and combat protection capabilities required by our Marines. At approximately, 3.5 pounds, the Marine Corps' Lightweight Helmet weighs slightly less than its predecessor and provides a high level of protection against fragmentation threats and 9mm bullets. Study results have demonstrated that the Lightweight Helmet with the pad suspension system provides greater protection against non-ballistic blunt trauma than the Lightweight Helmet with the sling suspension system. Therefore, the Marine Corps requires the use of the pad system in all of our Lightweight Helmets. We have completely replaced the sling suspension with pads. All new Lightweight Helmets produced by the manufacturer are delivered with the approved pad system installed. Independent testing conducted by University of Virginia and the U.S. Army Aeromedical Research Laboratory showed that the pads provide the best blunt trauma protection across the widest possible temperature ranges.

Current collaborative Research and Development efforts with the U.S. Army and industry partners have shown progress towards a potential replacement for the Lightweight Helmet. The Marine Corps' vision for the next Department of Defense helmet provides rifle ballistic

protection at the same weight as the Lightweight Helmet. Our goal is to produce the next generation helmet providing that level of protection as quickly as possible.

Personal Protection in Closing

It is very important to the Marine Corps that we provide robust personal protection solutions to our warfighters -- and provide these solutions to them immediately. Working with our nation's dedicated manufacturing base and our sister Services, the Marine Corps continues to be able to provide the best possible levels of personal protection to known and anticipated threats; and we remain committed to aggressively matching our equipment to changing threats. Our Personal Protective Equipment works.

Training Marines

It is easy to focus our force protection focus on new gear and equipment. However, taking care of Marines and protecting the force means ensuring they have the proper training to react to uncertain situations.

In order to properly train and protect our operating forces enduring the rigors and challenges of OIF and OEF, we have developed a very demanding, realistic and adaptive pre-deployment training program. The Pre-deployment Training Program (PTP) contains standards-based, progressive skills training which is evaluated by commanders and assessed by our Training and Education Command at the final Mission Rehearsal Exercise. The PTP includes counter-insurgency combat skills, as well as operational language and culture skills. Unit after-action reports and unit surveys, conducted by the Marine Corps Center for Lessons Learned, are shared Corps-wide and have influenced training changes to keep PTP relevant. For example, the Afghanistan Pre-Deployment Training Program, while similar in many facets to the PTP for Iraq, includes an emphasis on both mountain warfare and the integration of MAGTF combined arms. Force protection training runs through all blocks in the PTP, and it is a particularly important feature in each deploying unit's Block IV Mission Rehearsal Exercise.

During the past year, counter-IED pre-deployment training has been expanded to include home station training and use of mobile training teams. Additionally, counter-IED training lanes

and tactical search houses are currently under construction at several of our major bases. These facilities will support both "attack the network" and "defeat the device" training objectives.

CLOSING

We are committed to providing the Nation with multi-capable, ready forces. Our expeditionary nature and inherently balanced Marine Air Ground Task Forces make Marines ideally suited today's complex environment. As much as ever, the Corps needs your continued support and the support of the American people to ensure we are providing the very best ground equipment as we fight today's adaptive enemy and prepare for an uncertain future. Again, I thank you for the opportunity to report on behalf of our Marines and their families.

Mr. VISCLOSKY. Thank you very much.

Mr. Young.

COMMON ACCESS CARDS

Mr. YOUNG. Mr. Chairman, the issues of force protection, of course, are primary because we have to give our soldiers the best protection we can in order for them to carry out the mission that is important. And I am sure that a lot of the members will be discussing specific force protection measures.

But I want to ask you about the common access cards that are made available to contractor personnel, and that so many are unaccounted for. Do you see this as a problem? And if so, what can you do about it, or what are you doing about it?

Because having unauthorized personnel have access to sensitive areas where our American lives can be threatened is a worrisome situation. So I just wonder where we are on the issue of these common access cards.

General THURMAN. Congressman Young, first off, the forward operating base commander in all the forward operating bases, whether it be in Iraq or Afghanistan, control access into the base. What we do, to get to your specific point, is we use the biometrically enabled card system through the biometrics system to screen personnel before they come in to make sure that that data on that card is who that person is. And we have been working a lot to make sure that we control that access, but the commanders do that.

The other thing that we have is the surveillance systems in and around the base, plus the detection screening devices when folks come in and out of the base camp.

General FLYNN. Sir, one other thing, based on my experience in being able to get around Camp Victory or even down at the British camp down in Basra, is we had to have extra additional cards, other than the common access cards, to get access to different areas. In fact, I carried around four ID badges with me, depending on where I was going.

So I realize the sensitivity of the common access card, but we have taken some mitigation things in practice that do mitigate it. But I understand your message about having control over the cards.

Mr. YOUNG. Information that the staff has provided us says that the Department has approved an estimated 39,000 contractor employees for cards without verifying that background checks had been initiated or completed. Is this accurate information?

General THURMAN. Congressman Young, we can take that information and go back and verify that. I don't have knowledge of that right now. But I would be more than happy to go back from the Army and tell you what we know, working with General Thompson, and provide you what the Army has.

Mr. YOUNG. Well, I do have a real concern about this because access to sensitive areas where American lives can be threatened by people who—we might not even know who they are, whether they have ever been vetted for security, is worrisome and bothersome. So I hope you all pay attention to that.

Am I talking to the right people? Should I be talking to someone else about this issue?

General THOMPSON. Yes, sir, I think you are talking to the right people here.

From the standpoint of procedures, the people do have to go through background checks. To your specific question about contractors, contractors have to go through background checks to participate in any of the work that they do for the government. And those procedures are in place.

The other way to control that, and one of the things that we have just put in place in the Army recently, is another additional step with the country clearances. To make sure that when somebody has to go through the process to get a country clearance to go into theater, we run the joint checks to make sure that person doesn't come up as a convicted felon or has any issues that we would be concerned about.

BIOMETRICS

From an acquisition perspective, I think that we are really going in the right direction, and it was touched briefly on with General Thurman, with biometrics. Leveraging the database and the use of biometrics, you know, the fingerprint data, the eye scans, is really an area that has great promise in the threat environment that we are in theater right now and has a great promise for law enforcement. And that is a jointly-run program, the Biometrics Task Force for the Department of Defense is run by the Army as the executive agent, but all of the materiel solutions, from a database to the scanning devices, are all jointly developed and jointly worked.

General FLYNN. Congressman Young, I will owe you an answer back on our procedures for issuing the card, as well as our access procedures. And we will give you that as a record response, sir, if that is okay.

[The information follows:]

The Army does not prescribe guidance or overarching policy on installation or base access. This would fall under the auspices of The Office of the Under Secretary of Defense and U.S. Central Command for bases on theater.

Mr. YOUNG. Well, thank you very much.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Thank you, Mr. Young.

Mr. Moran.

COMMON ACCESS CARDS

Mr. MORAN. Thank you very much, Mr. Visclosky.

This is a shared concern, I think, on both sides of the aisle, this issue of common access cards. We had some testimony from the Inspector General that was very disturbing. And I would like to know, what has happened to all of these common access cards that were issued by contractors?

There were, I think we were told, about 24,000 issued for the employees alone; 303 contractors, as I recall, were given the authorization to issue common access cards. They were issuing them to their employees. And, as Mr. Young has suggested, they were giv-

ing them to people without requiring that they go through the vetting process.

Are we getting those cards back? You know, you are telling us what you are doing in the future, although it seems like this has been going on for 6 years now. But what are we doing about the cards that exist out there now?

General THURMAN. Congressman Moran, I know that the procedures that we just more or less talked about here have been implemented. And I know that, in theater, working with the contracting office down there, that they are going back and attempting to try to regain control of those.

I think what is important is what we have done with the biometrics, with the biometrics identification system and how that interfaces with the automated FBI database.

Mr. VISCLOSKY. General, if you could move your mike up, please. Thank you.

General THURMAN. And so what I can do is I can go back to the theater and get you exactly the answer to that question. And I would be more than happy to do that.

Mr. MORAN. Well, I think it would be useful because, until you can respond to the IG's findings, now that we know the extent of this, we have some culpability as well if we don't deal with it.

They said that about 93 percent of the cards that had been issued to foreign nationals had a government Internet access code on them. In other words, they could pass as government employees. A large number of the cards mistakenly, erroneously, perhaps deliberately, misidentified people as government employees rather than contractors. And while the IG can do these surveys and give us this information, we need to know the extent to which our security has been compromised by people getting on the base without proper authority.

I mentioned a time when I was in Baghdad and there were these folks flashing—while we were waiting in line, they were going through another entrance. And I asked if he was Army, and one of the MPs—I said, "Who are all of those guys?" And he said, "Well, they are Halliburton. They run the place." Well, they had their common access cards that had been issued by other Halliburton employees. And, you know, they never should have been issued.

So it is one thing to say you are tightening up, you are bringing in more technology. I don't think our concern was so much the cards that were issued by the military; they were the cards issued by contractors to contractors.

The Chairman has time and again talked about the fact that the contractors are really taking over many of our efforts to perform what used to be inherently governmental services. When we saw the number of contractors in Iraq, it was as many as we had military people. All of them have common access cards.

The IG also said that 93 percent of those cards have an inaccurate expiration date on them. You don't have to write all this down; it is in the IG's report.

We need to follow up on this stuff. You know, if he gives us this information, we are made aware of it. If we don't follow up and then there is some very serious breach of security, as I say, we share some culpability.

So I am glad Mr. Young raised this. Common access cards is—I think that is something that we are going to have to put some emphasis on until it is corrected.

I will assume that you are no longer issuing—letting any contractors issue those cards. Is that true?

General THURMAN. Congressman, is—I agree with you, there should not be any loose cards out there that are floating around. And we owe you the detailed procedures and what we are doing about the cards that was in the IG report. And we will bring that back to you. We need to go back to theater and get their current status of that, and I would be more than happy to take that for the record and bring it back.

[The information follows:]

The Army does not prescribe guidance or overarching policy. This would fall under the auspices of The Office of the Under Secretary of Defense, Intelligence and U.S. Central Command.

Mr. MORAN. Thank you, Mr. Chairman.

I would be interested for the record to know who it was that gave the authorization to the contractors to be issuing these cards to other contractors. Who is responsible for the policy itself, and who actually allowed that to occur?

It doesn't matter who the contractor was. That was an inherently governmental function, and it does compromise our security.

General THOMPSON. Sir, I do know that the procedures today, if you are a government employee, military or civilian, you get a common access card and a personal identification number. And that is how you get access into or onto a base.

If you are not a government employee, your access is based on the biometrics data, the fingerprint or the iris scan, the eye scan. And that is checked against both the FBI database and the Advanced Battlefield Information System (ABIS) database, which is another database. And that database is both here but there is also the local database that is there.

So we have really tightened up the procedures on access to all the bases based on what I just described.

Mr. MORAN. So just having that common access card doesn't get you onto the base anymore?

General THOMPSON. Doesn't get you onto the base.

Mr. MORAN. Well, they didn't mention that to us.

General THOMPSON. Without a pin or, if you are a nongovernment employee, without a biometrics scan of some kind, either fingerprints or the iris scan.

Mr. MORAN. But not what is on the card. They have to put their own fingerprint in, and then they have to check it against a database. It is not dependent upon what card they happen to be carrying.

General THOMPSON. Right. And the database is both local and global. And so they update the local database. And if there is any doubt, then that individual doesn't get on the base.

We can go back, like General Thurman said, and detail out the exact specific procedures that we go through. But I do know that that is the broad description of how they do that today.

Mr. MORAN. Well, if that policy is being followed, it is not as much of a concern, but that is not what we were led to believe by the IG. Thank you.

Thank you.

Mr. VISCLOSKY. Mr. Moran, we will get back to you on the authorization and the sequencing too. I think that is a very important question.

Mr. Frelinghuysen.

ELECTRONIC FRATRICIDE

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Gentlemen, welcome back. In a hearing like this, you never know what might get thrown at you. I have some questions relative to electronic fratricide on the battlefield.

A couple of years ago, I was at Offutt Air Force Base in Nebraska. And since it is on the Air Force Web site, the Rivet Joint aircraft has some pretty remarkable capabilities. One of the things I heard from the crews—I asked them how many missions they were flying over Iraq. And I was surprised—this was a couple of years ago—when they said none. And it was interesting, they explained that the sensors on the aircraft were, in effect, being jammed by all the devices deployed on the ground. I don't know whether there has been some improvement, but I would like your take on what is happening there.

I read in the New York Times, General Thompson, that the Army is setting up its own teams for electronic warfare. What is the battlefield out there like now? And what should we anticipate in this sort of area as we move troops from Iraq into Afghanistan? What sort of problems are there? Either from a Marine or Army perspective. It is pretty important.

General FLYNN. Sir, one of the things is, there is no doubt that the electronic spectrum is getting pretty crowded. And one of the key things that we are doing—and I know we are doing this in the Marine Corps, and I am sure the Army is—is we are deconflicting the frequency spectrum and what has been going on in the airwaves based on what missions are being performed. Because there are some issues with—some of the devices countering out another device.

So it is almost very similar to what you do in fire support coordination. You deconflict based on the mission that you are doing. And we have built the expertise at the operational planning unit to do frequency deconfliction, and that is what we are doing. We have to do it not only for our transmissions but also for some of our collection efforts and all those things. We do deconflict now, sir, and it is an active part of our operational planning and execution matrices.

Mr. FRELINGHUYSEN. And you are also obviously, both your service and the other services, are involved in the IED task force. And that, obviously, has——

General FLYNN. Yes, sir. In fact, we took a lot of our electronic warfare pilots and we trained them. Actually the Navy deployed some of them, with both Army and Marine forces, to help us with the management of the frequency spectrum.

So it is something that we actually have to manage and we have to deconflict, sir.

Mr. FRELINGHUYSEN. Yeah. Well, I am sure.

I want to hear the Army, where do you stand. I wonder whether the issue is being managed here. Obviously, our enemy knows of this, sort of, situation, and they can actually potentially make it worse.

General Thurman.

SPECTRUM MANAGEMENT

General THURMAN. Congressman Frelinghuysen, what I would tell you, sir, is, similar to the Marine Corps, one of the things that I learned—and I learned this the hard way going into Iraq initially—is how crowded the frequency spectrum is getting. When you add things such as our friendly devices as Blue Force Tracking, the Force XX1 Battle Command Brigade and below systems that we have that shows us where everybody is on the battlefield, your Unmanned Aerial Vehicles (UAVs), the full motion video—all of that takes spectrum. And then you put in our jammers.

What we had to do on my second tour was make sure that before every combat operation that you are constantly deconflicting the spectrum.

And so we have learned a lot about this. It is going to be the future.

Mr. FRELINGHUYSEN. Well, the spectrum is shared. You know, in Afghanistan we have our NATO "allies," I say in quotes, and they obviously have, you know, their own set of electronics.

General THURMAN. Right. And you are absolutely right, we have established electronic warfare as a specialty in the Army. We learned a lot from the Navy. The Navy helped us with this. And we see that as one of the things that we have to continue to develop in the future so we can get at those sorts of things that you see to make sure our systems are more effective.

Mr. FRELINGHUYSEN. But, historically, tell me if I am wrong, the Army has been relying on the expertise of the Air Force and Navy, is that right?

General THURMAN. Sir, initially, we had to go to the Navy to help us with the counter-IED effort because that is where a majority of the expertise was. And now we are developing our own capability in the Army, and we share joint assets.

Mr. FRELINGHUYSEN. I just want to know whether there is a game plan here.

General THURMAN. Yes, sir, there is.

Mr. FRELINGHUYSEN. Is there a task force?

General THURMAN. Yes, sir. We are documenting electronic warfare specialist into the Army force structure.

Mr. FRELINGHUYSEN. We have—the higher level is obviously ongoing cyber attacks.

General THURMAN. Right.

Mr. FRELINGHUYSEN. And you have other assets which could be, you know, compromised.

General THOMPSON. What General Thurman, Congressman Frelinghuysen, is pointing out is that we did rely, initially, heavily

on the Navy and the Air Force, because they had electronic warfare specialists as part of their force.

Mr. FRELINGHUYSEN. And you are training some of them up, according to what I am reading.

General THOMPSON. We have created that capability in the Army. We are starting to train soldiers from a force structure perspective, which is the process that General Thurman controls. We are growing that capability inside the Army.

And from a systems perspective, we look to deconflict that spectrum before we field something to a unit. So, in a lot of the labs and the chambers that we have, we put CREW devices with Blue Force Tracking, as an example, to make sure that there is not spectrum deconfliction. When we get a threat and we know the threat is using a different part of the spectrum, based on the intelligence reports, we adjust.

When you see upgrades to things like the CREW system, the anti-jam system, it is based on the threat moving to a different part of the spectrum. So we update the system and we do that deconfliction as much as possible.

Mr. FRELINGHUYSEN. This is a huge issue. It is a moving target. And you are giving us some pretty good clear assurance here across the services that you have this issue in hand?

General FLYNN. Yes, sir.

General THURMAN. I would just caveat one thing. We just have to continue to be adaptable to the threats as they emerge and as we field more systems to make sure, from a joint perspective, that we fully understand what we are doing in the joint domain of the spectrum. The spectrum is a huge, complicated issue.

Mr. FRELINGHUYSEN. The enemy has been looking over our shoulder, you know.

General THURMAN. Yes, sir.

Mr. FRELINGHUYSEN. Not only in Iraq, but obviously there are other adversaries. And I assume they know there is a certain degree of—I won't say chaos, but some difficulty in this issue of deconflicting.

General THURMAN. Yes, sir.

Mr. FRELINGHUYSEN. Is that accurate?

Okay, thank you, Mr. Chairman.

Mr. VISCLOSKY. Ms. Kaptur.

MRAP MAINTENANCE

Ms. KAPTUR. Thank you, Mr. Chairman.

Welcome. Good to have you before us this morning.

I just wanted to focus on MRAPs and the maintenance of those and how they are being received by soldiers and Marines in the field.

Our chairman, Mr. Murtha, has on several occasions spoken about encounters he has had, one in particular with a Marine in Germany at Landstuhl who commented that when they had a breakdown in theater that the Marines really weren't trained to fix it. And, in fact, the MRAP had to be winched and put on a flatbed and then hauled in to a repair site where contractors worked on it.

And my question is, is the field repair of MRAP vehicles beyond the training level of our Marines and soldiers? And are these repairs now being handled by contractors, or are you integrating this into the training of our regular force?

General FLYNN. Ma'am, I think there are two parts to your question there.

Out in the field, if an MRAP loses its mobility, the ability to recover that by another vehicle—for example, if it can still roll, you can self-recover with another MRAP, meaning you can hook up to it and you can tow it back into the operating base. If it has a severe mobility loss, meaning lost wheels, axles, we have to send out a pretty heavy vehicle, normally a tank retriever, to bring it back just because of the weight of this vehicle.

When the program was fielded, we did contract for 2 years at the operating bases for contractors to do that maintenance. That is not necessarily a bad thing for us, because it meant that we could keep Marines focused on doing other things, and we just bring it in to the garage to get fixed.

We don't do repairs on the road. We recover and bring them back to the operating base. And the issue there—and I understand where that Marine was coming from—is it is a heavy vehicle, and the only way you can bring it back really is with a vehicle of equal size and equal power to bring it back in, ma'am.

Ms. KAPTUR. So you are telling me that the repairs right now, General, are being done by contractors then?

General FLYNN. In the forward operating bases, yes, ma'am.

Ms. KAPTUR. Are you considering transitioning contracts to insourcing rather than outsourcing the repairs?

General FLYNN. Ma'am, when the vehicle was fielded, we had a 2-year maintenance contract that was part of how the program was developed. And right now we are looking at the way ahead on how to continue on with the maintenance of the vehicle.

Ms. KAPTUR. Who handles that? Is it just one contract with one major company?

General FLYNN. Ma'am, I would like to take that for the record. I am not sure how many companies are involved in that.

[The information follows:]

The following companies have contracts to perform maintenance on MRAPs in the Forward Operating Bases: (1) MANTECH (Afghanistan/OEF contractor logistics support only); and (2) MRAP Original Equipment Manufacturers (OEMs) provide Field Service Representatives (FSRs) as technical support to both OIF and OEF. The OEMs include BAE, Navistar Defense, General Dynamics Land Systems—Canada, and Force Protection Industries, Inc. Additionally, government mechanics from Red River Army Depot provide sustainment-level maintenance support in Iraq and Kuwait.

General THOMPSON. I can add to that a little bit. And the real expert on MRAP is sitting behind us here. But, from a broad standpoint, it is not atypical to do contractor logistics support for the first couple of years a system is fielded. And MRAP is no different.

The emphasis on MRAP initially was getting the most vehicles out there as fast as possible. And although you like to bring the logistics package and the sustainment package along, we took conscious, purposeful decisions to field more systems. And we are catching up a little bit on the sustainment packages. But we do have the contract logistics support. Because there are different

variants of the systems, it is with the contractors that built those systems, for the most part.

We did the same thing with Stryker a number of years ago when we fielded the Stryker vehicles. We made a decision to field those with mostly contract logistics support. And we are now bringing that capability to maintain the Strykers back in and training the soldiers to do that and putting that force structure into the Stryker formation.

And so, as we go forward on MRAP, ma'am, depending on how many and what variants we keep in the force structure, we will train soldiers and Marines on how to take care of those things and not rely exclusively on the contractors.

Ms. KAPTUR. I am glad to hear that, because we have some information here. For instance, a soldier doesn't know how to release the air brakes prior to the vehicle being towed, or they can't do simple repair like headlights. This is according to information that we have.

So I am just curious, I mean, you would think the soldier would be at one with their equipment, or at least there would be people trained in theater to handle whatever might occur since these are so essential. We have had over 60 percent of our injuries due to explosive devices-related——

General THOMPSON. When those soldiers and Marines that are using those vehicles get those vehicles fielded to them, they get new equipment training. So they are taught the things that they need to be taught in order to operate those vehicles safely and to do the operator-level maintenance. We call it "Dash 10" level maintenance, but it is the operator-level maintenance. So it would surprise me that we didn't take that soldier through the training to know how to release that brake on the system, because that is part of operator-level training.

MRAP VEHICLE IMPROVEMENTS

Ms. KAPTUR. Mr. Chairman, time has probably expired, but I also wanted to ask questions for the record dealing with the actual comfort of the soldier or Marine in the vehicle and any after-market changes that have been made so that they are not bumping their head or it is easier for them to get down.

I know that, when we were over there, we looked at several pieces of equipment; we talked to the soldiers and the Marines who were using them. And what changes have been made or are you considering making in the after-market arena to make it more functional?

For instance, they were complaining that when they had to sit in the back, they were facing inward rather than outward, so that they could see the field. And I don't know whether that has been changed or not.

Do you have any comments you want to make on after-market changes?

General THOMPSON. We continue to take feedback from the soldiers and the Marines in the field and make improvements to those vehicles. We do that not just on MRAPs but on all systems.

To the specific question about the soldiers facing inward, I mean, one of the issues there——

GUN PORT ON MRAPS

Ms. KAPTUR. They can't fire through the ports. That is the issue.

General THOMPSON. Yes, ma'am. But gun ports on the sides of the vehicles were something that was looked at initially, and we elected not to go with the gun ports—and I can ask Mike Brogan to correct me if I am wrong—because a port is a hole in the side of the vehicle, and that creates a seam, if you will, or an area of vulnerability. And so the vehicles are being used as transport—we don't necessarily want to fight from those vehicles. And so, having gun ports on the vehicles is not something that we want.

And because of the protection from the undermine, the vehicle has got a V-shaped hull. So the configuration that the manufacturers did—we left it up to them, based on our requirements. But if you can imagine a V-shaped hull, where the space is, the leg room, if you will, is in the center where the V goes down. And so a lot of the seats facing to the center are because of leg-room considerations and space considerations inside the vehicle.

Mr. VISCLOSKY. The gentlelady's time has expired.

Ms. KAPTUR. I thank the gentleman.

Mr. VISCLOSKY. Mr. Kingston.

Mr. KINGSTON. Thank you, Mr. Chairman.

HUSKY MINE DETECTING VEHICLE

General, I wanted to ask on the Army side of things—and I am not sure if the Marines are using the Husky or not. But I actually did not know about the Husky until the National Guard brought it to my attention and they wanted funding for it, the Georgia National Guard.

But, as you know, since 1979 the USDA has been using ground-penetrating radar to study soil samples and archaeological and cultural resources and things like that, but that the Husky puts this to use for IED detection. And yet—I have to confess full ignorance, there may be a lot of money in the budget already for it, but I have never heard about it from the Army. I heard about it from the Army Guard.

So I was just wondering, is this something that is very useful? Somewhat useful? Does it have problems? And do we need to support more money for it?

General THURMAN. Congressman Kingston, the Husky, what our experience has been, it is a good vehicle. It is good to look at shallow buried IEDs. We have those in our route clearance teams operating in Iraq today. We are going to be putting some into Afghanistan. They have asked about those.

And what it does, it looks for nonmetallic and metallic IEDs and for underbelly threats. That was one of my biggest complaints, as a division commander, is having some type of ground-penetrating capability that you can find deep-buried IEDs. And we are still working through that. The Joint IED Task Force has been working that. But this is an important system to keep in our route clearance teams.

Mr. KINGSTON. Well, why is it, just to kind of explain it to me, that the National Guard is asking for it as opposed to, say, the MRAP?

And this Committee, as you know, got very excited about MRAPs 2 or 3 years ago. And you hear so much about the reduction in fatalities and injuries because of MRAPs, but we don't hear about ground-penetrating radar systems like the Husky as one reason that the fatalities have decreased.

How many are there in there? How wide is the use, for example? And is it something that this committee should really be more enthusiastic about?

General THURMAN. Congressman, what I would tell you, as a guy that takes the requirements into the Army, is we look at a myriad of route clearance capabilities. And Husky is one of those that we have in the system—or in our route clearance capability. And we can give you the full lay-down of all of those capabilities and show you the importance of each one of those. And I would be happy to lay that down for you.

But, yes, right now Afghanistan has asked for 80 of them to go in there. And the 48th Brigade, who I have been working very closely with, out of Georgia, they will fall in on the MRAPs that are over there. But we are going to put more route clearance capability into Afghanistan.

Mr. KINGSTON. So if we request an earmark for more of that, that would be something that we would get Pentagon support for?

General THURMAN. Sir, I will take the requirement and I will pass that up once we validate that, depending upon the other balance of capabilities they are asking for in Afghanistan.

Mr. KINGSTON. I think that the 48th got—is Kentucky Guard——

Mr. VISCLOSKY. Excuse me, if I could. General, if you could move the mikes closer to you? Thank you. That would be terrific.

Mr. KINGSTON. But they seem to have gotten, you know, fired up about it from the Alabama National Guard. But as they were about to go over there, they said, "We really would like to have these." And so——

General THOMPSON. I think what we should do, Congressman, is go back and look at what we have as the total requirement, which is the purview of the G–3. How many of those do we think we need in the force structure? And I, frankly, don't have that information right in front of me, and how many we have bought to date and the distribution of those assets in theater.

If the Guard is asking for them, there is no preference to give them to, active soldiers versus Guard soldiers. Whatever soldier needs that capability is going to get that capability.

And we do look at the balance of those. And Huskies, like General Thurman said, are part of the dedicated route clearance and convoy clearance teams that go out there in advance of a convoy or a mission to do whatever they can to eliminate the IEDs that could be out there in the force. And Husky is a great system. And from a requirements perspective, we should take that number back to you and lay that out.

Mr. KINGSTON. All right.

[The information follows:]

The total Army Program of Record requirement for Huskies is 710. This is based on a Modified Table of Organization and Equipment (MTO&E) requirement for 672 Huskies in 28 Route Clearance Companies and for 38 Huskies to support Table of Distributions and Allowances (TDA) units. In addition, the Army has a validated Operational Needs Statement (ONS) for a total of 286 Huskies in both the Iraq

(222) and Afghanistan (64) Theaters. We have fielded 201 to U.S. forces in Iraq and 44 to U.S. forces in Afghanistan. We will begin fielding systems to fill MTO&E requirements in FY10.

General Flynn.

General FLYNN. Sir, my experience, I have actually been on route clearance with the Husky. I was with the Alabama National Guard. So it is a valuable capability for the IED.

But it goes back to the larger issue, that the way to defeat the IED is through multiple platforms. There is no one silver bullet. And this capability is one of those capabilities. Just like, right now we are looking at other capabilities that we would like to take into Afghanistan to enhance our counter-IED capabilities. So all these are pieces to the puzzle of putting the enemy on his back heels and us maintaining the advantage. But it is an effective capability.

And my understanding of this equipment is, when units deploy into the theater, they fall in on it. So it was a key part of the 20th Engineers Brigade route clearing teams, no matter what area of Iraq they were operating in.

Mr. KINGSTON. Well, we certainly want to work with you guys on this, because we want to make sure everybody—you know, where it is practical, that we can support the effort together.

Mr. Chairman, thank you.

Mr. VISCLOSKY. Thank you.

Mr. Dicks.

Mr. DICKS. Why don't we go ahead with the regular order? I will come in at the end.

Mr. VISCLOSKY. Mr. Bishop.

BODY ARMOR

Mr. BISHOP. Thank you very much, Mr. Chairman.

Thank you, Mr. Dicks.

Gentlemen, welcome. I am interested to explore body armor.

General Thurman, recent news articles in the Army Times and Defense Review, along with your testimony, indicate that the X Small Arms Protective Insert XSAPI plates will provide better protection than the current Enhanced Small Arms Protective Inserts. And in your testimony you state that the Army is going to procure 120,000 sets of the X Small Arms Protective Inserts in 2009. And you say that the plates will be shipped to Kuwait as a contingency stock, and they will be available for use by the theater commander.

If the X Small Arms Protective Insert plates are better than the other plates, why are you storing them as a contingency stock rather than getting them out to the soldiers immediately?

And wouldn't you say that there is a greater need for the X Small Arms Protective Insert plate in Afghanistan, particularly where, according to news accounts, the enemy is using the Chinese armor-piercing rounds, which are copycat rounds of our armor-piercing rounds? So wouldn't you think that it would be urgent to get that out to the soldiers immediately as opposed to stocking them in Kuwait as a contingency?

General THURMAN. Congressman Bishop, we made that decision, on the 120 sets, to go ahead and move those into theater contingency stocks, because the theater had not asked specifically for those to be issued. And that is why we positioned those forward.

Now, in a classified sense, we can show you the data that we have on the threat. And we would be more than happy to show you that, with the penetration capability and all of that and what that defeats.

[The information follows:]

The Army G3 and ASA(ALT) have worked in conjunction with SAFM–BUL to arrange a classified briefing for Congressman Bishop on the topic of the current threat level in Afghanistan and how it relates to body armor.

Mr. BISHOP. But you do, in summary, think that it is better than the ones currently used?

General THURMAN. I will let General Thompson address from the perspective of body armor, because he works that every day. But I would tell you I think the body armor we have today is very good, the Interceptor Body Armor that we have.

Mr. BISHOP. I was just trying to understand if one was superior to the other. And according to Army Times and Defense Review, the X Small Arms Protective Inserts are better than the enhanced.

General THOMPSON. Sir, I would answer the question this way, if I could: "Better" is in the eyes of the beholder. So does XSAPI provide a higher level of protection? Yes, or we wouldn't have procured it.

Do we need that level of protection based on the threat? And that is what General Thurman is referring to. That is something that we cannot discuss here.

Mr. BISHOP. Okay. I understand now.

General THOMPSON. But the XSAPI is heavier. And so it is the balance, it is the better—from the commander's perspective, do I want something that is maybe high level of protection, but if it is heavier, how does that impact my soldier or Marine's ability, especially in a place like Afghanistan, to carry all that extra weight and be able to do his mission.

Mr. BISHOP. Yeah, we had a hearing on that yesterday, so I appreciate it.

General THOMPSON. Yes, sir. And so it was part of the decision calculus. And that is why having it available in theater so, if the threat materializes or the commander thinks he needs that, then it is available to them. So that is where I leave that question at that point.

BODY ARMOR TESTING

Mr. BISHOP. That is understandable.

Do the Army and the Marines collaborate in the process of improving the body armor?

The DoD Inspector General (IG) recently reported that there were some deficiencies in the Army's data recording process for the testing of the body armor. Can you, kind of, tell us in terms of those deficiencies that the Inspector General discovered?

And describe for us the stages that body armor is actually tested. And tell us—and Ms. Kaptur has stepped out, but the subcommittee is very, very concerned about—well, very, very interested in, I should say, the extent to which the testing is contracted out.

General THOMPSON. There are a couple parts to your question.

Do the Army and the Marine Corps collaborate on personal protection equipment for soldiers and Marines? The answer is, absolutely. That data is shared.

The standardization of test processes and test criteria is something that is ongoing right now. And that was one of the subjects of the DoD IG report. And that effort, not just with the Army and the Marine Corps but also with the Special Operations Command, is ongoing right now.

We have addressed, well before the IG report was written, the systemic issues and the test processes and the test procedures on all personal protective equipment at multiple levels inside of the Army and the Marine Corps. We have a process called the Army and Marine Corps Board where we look at these requirements and look at how do we develop those joint solutions so if, for example, if we go to a higher level of protection on a combat helmet, is it just the Marines that are going to do that or are the Army and the Marines going to do that together? And those are the kinds of discussions we have all the time.

The body armor that the soldiers have is the best in the world. The body armor protects the soldiers against the threats that are out there. We test the body armor through multiple means. You can't even begin to produce body armor unless you go through a first article test to go into production. And then, when you are in production, every production manufacturer has lot acceptance tests, where we test the individual lots before they are issued, even after they have gone into production.

And then we have a very detailed surveillance testing program, where we pull plates out of the inventory and test them with nondestructive test equipment. We X-ray them, and then we bring them back and shoot them to make sure that, depending on how long they have been out there in the field, they are still providing a level of protection.

So I am very confident that the overall testing process that we have in place makes sure that the plates are good when they are issued and that they are good after they have been in the field for a while.

Mr. BISHOP. Is that process contracted out, or do you do that in-house?

General THOMPSON. Part of the testing has been done by National Institute of Justice-certified lab facilities in the past, with the appropriate government oversight. And this is an issue we are working through right now.

From a policy perspective, we have elected to bring in-house the testing of body armor, because we think it is an inherently governmental thing. If the capacity is not there to do it in-house in a government facility, we may do some of that in the contractor facility, but it will have the appropriate inherently governmental oversight of that process from the standpoint of the program office and the Defense Contract Management Agency.

And even if it was done in the contractor facility in the past or could be done in the contractor facility in the future, it will be done against the standard test protocol and process.

Mr. BISHOP. Thank you, Mr. Chairman.

Mr. VISCLOSKY. Ms. Granger.

HELICOPTER SURVIVABILITY UPGRADES

Ms. GRANGER. Thank you.

My question has to do in Afghanistan with the consideration of our airborne assets, specifically helicopters. And we have had hearings and know that the Army and Marines both are increasing the number of helicopters.

My concern is the leftover missiles from the Soviet-Afghan conflict. And my report said there could be as many as 2,000 Stinger missiles and portable surface-to-air missile systems that I know are outdated, but how do we—what do we specifically know about their capability and the danger to our helicopters, particularly with, like, the SAM–7, the Stinger assets in there left by Iran? And can you address that, please?

General THURMAN. Yes, ma'am. What I would tell you, as far as the specifics of what we know about that, that is classified information. And we could do that in a closed hearing with you on that.

[The information follows:]

The Army G2 has worked in conjunction with SAFM–BUL and OCLL to arrange a classified briefing for Congresswoman Granger on the topic of leftover missiles from the Soviet-Afghan conflict.

I would tell you that is a concern of ours. And that is why it is so important to continue to upgrade our countermeasures systems on all of our aviation assets as we put more airframes into Afghanistan. But we can tell what you we know about that in a classified sense.

Ms. GRANGER. We will make sure that happens.

General THURMAN. All right, ma'am.

General FLYNN. Ma'am, from the Marine side of the house, too, since the beginning of our operations in Iraq and Afghanistan, we have continually been upgrading the aircraft survivability measures that are on the airframes. So we can give you the capabilities of those systems in a classified forum, as well as what we think the threat we are going to face. And that is the best forum to do that, and we will be happy to do that.

Ms. GRANGER. We will do that.

Thank you.

Mr. VISCLOSKY. Mr. Hinchey.

JOINT LIGHT TACTICAL VEHICLE

Mr. HINCHEY. Thank you, Mr. Chairman.

And thank you, Generals. Thanks very much. I very much appreciate what you are doing and very much appreciate the answers that you are giving to these questions. It is very informative, and I think it helps us a lot.

One of the things I wanted to mention to you is the focus of attention that you give on the safety and security of the military operations, the vehicles and things of that nature. And, as I understand it, there is a new vehicle that is under development, the Joint Light Tactical Vehicle. The focus of attention for this vehicle apparently is on the circumstances that are known and, to some extent, anticipated in Afghanistan rather than Iraq. And, as I understand it, this vehicle is still undergoing analysis, or it hasn't

gotten to the point of development yet. And I would appreciate anything that you could tell us about that.

In addition, I understand also that there is a possibility that there may be a requirement for a hybrid in that Joint Light Tactical Vehicle. Is that the case? Or is something else as sophisticated as that moving forward?

General FLYNN. Sir, we are very interested in the Joint Light Tactical Vehicle. It is a joint program. And, as I read the other day, the Australians are also interested. So also some of our allies are interested.

One of the things on the Joint Light Tactical Vehicle is, it is in the technology demonstration phase right now. And that phase will last about 24 to 27 months. There are three different manufacturers, with three variants each, that are going to go through this demonstration phase for us to find the best possible alternative.

The key part about this vehicle is what we are seeking to do in the development of the vehicle is we are seeking to get the right balance between what we call the iron triangle—to balance payload, performance, and protection—and to get the best out of all three. Because there is protection in mobility, and there is also, you know, the ability to payload. The heavier you armor the vehicle, the less payload you have. So in this vehicle we are trying to balance all three. And we are trying to get back some of our battlefield mobility in this.

And also the transportability of the vehicle, we want to be able to have it to be helicopter transportable by the CH–47 and by our heavy lift assets as well. And I know that, as we are looking at the vehicle, we are going to press technology to deliver the best they can in terms of the power train, in terms of the engine. All those things are things that we are going to look at, as this goes through its technology demonstration phase right now, sir.

General THOMPSON. And, sir, if I could just add to that from an acquisition perspective, where MRAP is led by the Marine Corps program office with full Army participation, the Joint Light Tactical Vehicle is led by the Army with full Marine Corps participation. So these are two great examples, I think, where we look together at what the requirements are and try to develop joint solutions.

And everything that General Flynn just described is exactly correct. We are at the first part of the technology demonstration phase for the three contractors that were competitively selected. And there was a protest to the GAO by two contractors that weren't part of the three that were competitively selected to go into source selection. And the GAO ruled in favor of the government and said our source selection process was done fairly. And so we will evaluate those three contractors over the next 27 months.

Mr. HINCHEY. Is the hybrid issue going to be included in this?

General THOMPSON. The three designs that are in the technology demonstration phase do not include a hybrid solution. But at the end of the technology demonstration phase, those three and any other competitor out there that wants to propose against our requirements will be fairly evaluated and taken forward. So if somebody has a hybrid solution in a vehicle that meets the other re-

quirements, they will have an opportunity to compete again and be selected.

FORWARD OPERATING BASE SECURITY

Mr. HINCHEY. Thanks very much.

If I have time for just one more brief question about the situation that is developing in Afghanistan, last July there was an attack in eastern Afghanistan against our military forces. And I think that there were a number of military forces at that time who were killed. I think that number was nine or something in that neighborhood. There were something in the neighborhood of 200 people that caused that attack, and they were very well armed with a variety of materiels. And I think that it is to be expected that something similar to that is going to happen again; we are going to experience those kinds of things coming up in the future.

Can you now, under these circumstances, tell us how many operations there are in eastern Afghanistan, anticipating what is going to happen in the future? And what kind of technology is about to be used or is in the process of being used to try to determine when those kinds of attacks are likely to occur? Is there anything like that that you can talk about right now?

General THURMAN. Congressman, I know exactly what you are talking about, about the attack that you referred to.

The theater commander, General McKiernan, in Afghanistan, working with CENTCOM over there, can tell you, you know, from an operational perspective what they are doing.

As far as technologies, what we are trying to do is to give them the surveillance capabilities, the sensors, the cameras. They have asked for that to protect those combat outposts and forward operating bases. And we are pushing some of those capabilities forward. As a matter of fact, recently I saw some of it in use. So you have that around the base perimeter or the combat outpost to provide that early warning and sensors.

But it goes back to what General Flynn said a while ago. There is no silver bullet with the way they are operating, and it requires training and constant awareness of the enemy and the threat you are facing.

General FLYNN. One thing I would like to add to what General Thurman said: This all starts back in the United States when we do our predeployment training. Right now, what we are focusing on is developing at the company level, which is a new twist of how we are operating now, intelligence cells and operation cells at the company level because of how we are spreading out on the battlefield to deal with this threat.

We are also providing them with the ability then to integrate the intelligence that they are getting from various sources, to include human intelligence, on the ground. Like General Thurman said, we have developed for Afghanistan for our forward-operating bases a new ground-based surveillance system that they can use, both—some that are—you have the big version that you need a tractor trailer to move; you have a medium one that can move with a Humvee-type vehicle; and then we also have one that is man-portable.

So we are not only equipping Marines and soldiers with the things that they need to be safe, but we are training on how to do it. And we need to make sure that they know how to do it before we deploy them. So that is all a key part of doing the things and to make sure we are not surprised out in the field, sir.

Mr. HINCHEY. Thank you very much.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Dicks.

MRAP ALL TERRAIN VEHICLE

Mr. DICKS. Thank you, Generals.

Maybe you have covered this, but I am just going to ask it one more time. We understand that some of the MRAPs are too heavy and would have a problem going offroad. And now going into Afghanistan, you know, you are talking about the all-terrain vehicle, or there is another one, the Joint Light Tactical Vehicle.

Are we in a situation where we are buying too many of the MRAPs that are too heavy and are not as flexible? There has been a concern about that. Or are we adapting and going with the lighter vehicle? And can you give us the status on it?

General FLYNN. Sir, from the Marine Corps perspective, what we developed last summer was a comprehensive ground tactical wheeled vehicle strategy, or a ground tactical vehicle strategy. And what we are trying to do in that strategy is to field the number of vehicles that have different capabilities in the right numbers that gives us balance, that we could use vehicles where they could best be used situationally dependent. For example, the current MRAP we have does very well in certain areas of Iraq; it wouldn't do so well in some areas in Afghanistan.

We are looking for a lighter vehicle. We are looking for vehicles with more flexibility so that we could use them over a wider range. And we do have that plan to do it, and we are actively pursuing it.

The key thing for us to do is to balance the needs of each of those vehicles, that we get the right number and have just the right amount of capability and not excess capability in any one area, sir. And that is our approach.

Mr. DICKS. Okay.

What is the Army's approach?

General THOMPSON. Sir, it is the same. The total requirement for MRAPs to date has been over 16,000 vehicles. About 12,000 of them are for the Army.

Mr. DICKS. Are we buying ones that we don't need?

General THOMPSON. No, sir. We are at the end of the requirement and the production for the MRAP. The MRAP all-terrain vehicle is a requirement to get a lighter vehicle that can handle some of the offroad mobility with the levels of protection that we seek. We are in the source selection process right now to get a lighter MRAP to handle some of the challenges in Afghanistan.

Mr. DICKS. So how many have we bought so far?

General THOMPSON. The total requirement and buy for MRAPs has been 16,238.

Mr. DICKS. But how many have we bought now?

General FLYNN. We have bought them, sir.

Mr. DICKS. This is for both the Marine Corps and the Army?

General THOMPSON. And the Navy.

Mr. DICKS. So the light ones are on top of the 16,000?

General THOMPSON. That is correct.

Mr. DICKS. Are there going to be extra ones that are not used in Iraq or Afghanistan that are going to be deployed in the United States back to the units?

General THURMAN. Yes, sir.

General THOMPSON. Yes, sir. What the services have done is, we have looked at the enduring requirement for MRAPs. A lot of those type of vehicles will be in route clearance companies.

But we know what we think the requirement is for MRAPs and the MRAP all-terrain vehicles in Afghanistan. From an Army perspective, for Afghanistan it is about 2,670 MRAPs. And we think the requirement right now today is for about 2,000 of the lighter MRAP all-terrain vehicles. None of the MRAP all-terrain vehicles have been bought yet because we are just now in the evaluation process.

Mr. DICKS. So you need 4,600?

General THOMPSON. No, sir. The Army requirement right now is 2,080 for the MRAP all-terrain vehicle.

Mr. DICKS. Okay. But you are not going to use any of the regular MRAPs?

General THOMPSON. No, we are, sir.

Mr. DICKS. How many of those?

General THOMPSON. The requirement for Afghanistan is 2,675. That is a subset of the 16,000 that have already been bought. So we are going to use them in Afghanistan and are looking—if we have a viable solution against the requirement for a lighter vehicle, we will put some of them on contract as we go forward.

Mr. MORAN. Would the gentleman yield?

Mr. DICKS. I yield.

MRAP PROCUREMENT

Mr. MORAN. Thank you, sir.

The IG also told us that, with regard to these purchases, oftentimes you don't seek out quantity discounts, and, in one case, spent $90 million more than needed to be spent because no quantity discount was requested or provided.

Mr. DICKS. That was the Marine Corps that did that.

General FLYNN. Sir, let me answer that, sir, if I could.

Mr. MORAN. There was a 1,500 MRAP order, I grant you. But they also talked about the fact there was a disparity in the price of MRAPs from $300,000 to $1.1 million. And that applied to the Army, as well as the Marine Corps.

But go ahead.

General FLYNN. Sir, the best way I can answer that was the Marine Corps was the program lead for the entire Department of Defense. And we have reviewed the IG report, sir. And keep in context that when the MRAP program was under way then, and we were trying to field those vehicles as quickly as we could. We went out to nine or 10 different manufacturers of those vehicles to ask them to give us the best that they could give us and that we would

push them through so that we could get these vehicles as quickly as we could to the soldiers and the Marines who needed them.

And, as the IG reviewed that, you know, we understand what is in the report, sir. We took the lessons learned and we will apply that to procurements in the future. But, again, sir, this was one where speed was important, and that is what we did, sir.

Mr. YOUNG. Mr. Dicks, would you yield for a question here?

Mr. DICKS. Yes, I yield.

MRAP DISPOSITION

Mr. YOUNG. The issue of MRAPs in Iraq is a bookkeeping item here. As we withdraw from Iraq, we won't be using nearly as many MRAPs in Iraq. The MRAP is not the ideal vehicle for Afghanistan because of the terrain, because of the lack of paved highways, because of the mountains, et cetera.

So the MRAP ATV is, as Mr. Dicks has been discussing—what is the plan for the MRAPs that we will no longer use in Iraq, that we will not send to Afghanistan? Are we going to bring them home? Are we going to leave them in Iraq? Are we going to sell them to somebody? What is the plan.

General FLYNN. Sir, from the Marine Corps, we own about 2,225 MRAPs. And our plan right now is to keep about 800 operational, and we would put the remainder into our prepositioned stocks for use in an area that they would be well-suited to be operated, sir.

So that is what we are looking at right now. It is not finalized. But some would remain in the operational inventory, depending on where they were needed, and then the rest would be put in our prepositioned stocks. And some could even be put in our sea-based prepositioned stocks. But we are still working through the plan, but that is the general approach right now, sir.

Mr. DICKS. Can the MATV be transported on a C–130?

General THOMPSON. I am just checking with General Brogan.

The requirement is to be able to. So that is one of the things that we will be able to evaluate from the offerors that are in the source selection right now, is can they meet the C–130 transportability.

Mr. YOUNG. Can we get General Thompson's response to the question, what do we do with the MRAPs?

Mr. DICKS. Yeah, of course. I yield.

General THOMPSON. I am going to let General Thurman answer that one, because it is more of a requirements issue, sir. And so he is going to give you that answer.

General THURMAN. Congressman Young, what we have looked at is, right now there is a need right now for 702 training vehicles to eliminate some of the training concerns that we have had with soldiers going over, you know, getting new equipment fielding. There is a requirement right now. We are trying to fill that. So there is a training requirement to put that at our combat training centers in our training centers so we get that training.

The Army is much like the Marines. We are going to put some forward stations in our Army prepositioned stocks. We are going to put some of them in our other formations to enable them—or maneuver enhancement brigades or sustainment brigades. There is a requirement for command and control vehicles in some of our logistical units.

So what we have looked at is how we use all those. We intend to integrate the MRAPs in a lot of our force structure in the Army. So they are not going to be sitting being wasted. We don't see that. And that is what we are undergoing right now as we look at all our force structure.

Mr. YOUNG. Well, I thank you.

Thank you, Norm.

Mr. DICKS. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Ms. Kilpatrick.

REMARKS OF MS. KILPATRICK

Ms. KILPATRICK. Thank you, Mr. Chairman.

Good morning, Generals, one more time.

That is where I was going with some of that, but let me ask you this. From the discussion I have heard this morning and the reading, the Marines service is in charge of the MRAPs procurement, the coordinating and all of that.

General FLYNN. That is correct, ma'am.

Ms. KILPATRICK. And the JLTV, which is another joint operation, the Army is going to be in charge of that.

General THOMPSON. Yes, ma'am.

Ms. KILPATRICK. Similar vehicles, right? MRAP and the JLTV, is it a different vehicle, is it similar?

General FLYNN. Yes, ma'am, it is different in a number of ways. The MRAP vehicle—for example, the MRAP all-terrain vehicle that we are looking at developing, as General Thurman said, it is going to be C–130 transportable.

Ms. KILPATRICK. And is that the same, when you talk about the MRAP vehicle, the ATV vehicle, is that the JLTV?

General FLYNN. No, ma'am.

Ms. KILPATRICK. That is a third.

General FLYNN. They are two different vehicles. And primarily you can distinguish them by weight and capability. The MRAP all-terrain vehicle, we are hoping that that weight is going to be somewhere around 22,000 pounds. On the JLTV we are looking for a vehicle that—I would hope, optimistically, is transportable by helicopter, so you have got to be in about the 15,000-pound range.

Ms. KILPATRICK. ATV's weight, what is that?

General FLYNN. An all-terrain vehicle, 22,000 pounds is about where we are look at. I think max on a C–130 is about 25,000 pounds.

Ms. KILPATRICK. And both of those are anticipated to be used in Afghanistan?

General FLYNN. I think the JLTV, because it is going through the technology demonstration phase right now, we are not going to see that vehicle until, I think, 2015, is when we are going to have that.

Ms. KILPATRICK. So it won't be immediately in Afghanistan. I hope we are out of there long before that.

General FLYNN. That is what we are looking at, ma'am, is we are not seeing complete fielding of the vehicle until 2015.

FORCE PROTECTION

Ms. KILPATRICK. So do we have the force protection available as we move into Afghanistan, in terms of the equipment and all? Not just the body armor, but the whole arena. Are we ready to protect the forces with what we have today?

General FLYNN. Ma'am, I think if you go back to what I said a little bit in the beginning, is that force protection is a combination of a number of things.

Ms. KILPATRICK. Sure.

General FLYNN. We have made tremendous, I think, progress in how we train the force before it deploys. We are using new techniques. We are using new observation techniques. We are using new tracking techniques. Our goal at times is to always be the hunter and never be the hunted.

Ms. KILPATRICK. Except we are being hunted at the moment.

General FLYNN. And we are the hunters now. And we give Marines that mindset. And part of that is knowing the environment that you are operating in, anticipating changes in that environment, and knowing exactly when that changes. And that allows us to spot IEDs. That allows us to figure out people who don't belong.

ARMORED TRUCKS

Ms. KILPATRICK. Okay. Let me stop, because—thank you, General. And I appreciate it. Thanks for that dedication.

So, therefore, if the JLTV is not going to be ready, and you said the MRAP ATV might be ready, will we have the quantity we need in the terrain of Afghanistan to protect the troops and win the war? Now, "win the war" is a whole philosophical thing, but protect the troops is—is it enough? I mean, do we have enough to go in there? The President has already announced that we are sending so many thousand into Afghanistan. Are my troops going to be protected?

General FLYNN. Ma'am, the short answer is your troops are going to be protected.

Ms. KILPATRICK. And will they have what they need to fight?

General FLYNN. Yes, ma'am.

Ms. KILPATRICK. All right, General, please.

General THURMAN. Ma'am, if I could, every single day and week we look at the requirements through a process inside the Army of meeting the needs of the commanders to make sure not only do they have what they need in theater but also the next deployers. I look at that every single day in the Army over there to make sure that we are meeting those needs.

And I would just say what General Flynn said. We have a combat-experienced force now, and we are leveraging everything we learn every day in terms of what we are seeing on the battlefield. But I can assure you that we are going to make sure, from an Army sense and a Marine Corps, that we provide the best equipment we have.

COMMON ACCESS CARD

Ms. KILPATRICK. Okay. And if the President announces and we are not ready, will the services speak out and say, "Mr. President,

we may need a little bit of time to get ready for this"? We were not ready when we went into Iraq, and consequently we went in there with the wrong vehicles and too many IEDs and all of that. I am hopeful we don't repeat, and it sounds like we are more ready for this one.

Which is that common access card. It is not the combat vehicle, but it is just as important. And it would help today, General Thompson, when you talked about the other two lines of verification being biometrics, because that is important. The last time I think we heard just the card, and contractors were issuing the card to contractors. And we didn't feel like the monitoring—which is why some of my colleagues spoke about that today. It is so important.

And you are going to get back with us with some more information.

General THOMPSON. Yes, ma'am.

Ms. KILPATRICK. Contractors issuing cards to other contractors with little monitoring, that is not a good thing.

Thank you. Please protect the troops. Do your jobs. We love you and appreciate your service. Thank you.

Thank you, Mr. Chairman.

FORCE PROTECTION CHALLENGES

Mr. VISCLOSKY. Thank you very much.

Gentlemen, I would like to talk to you about force protection challenges for logistics units. It certainly received national attention in March of 2003, during the second Gulf War, when a convoy of the U.S. Army's 507th Maintenance Company and elements made a wrong turn and were ambushed.

Could you provide us an overview of the organizational training and equipment improvements made to improve force protection for Army and Marine Corps logistics units?

And the other question would be, how have any doctrine or training programs been changed to try to improve circumstances?

General THURMAN. Mr. Chairman, I would be happy to answer that. I am very familiar with 2003.

What we have done is—it is not one piece of kit, if you will, that protects a convoy. First off, it is the training that we have done at our combat training centers. But convoy protection has been improved in what I would classify in about four distinct areas.

It is improved situational awareness. And what am I talking about there? I am talking about having the right communications gear in the vehicles: the blue force tracking system, which tells everybody where they are at and exactly the location. We have issued satellite communications. The use of also our normal onboard SINCGARS radio.

IED detection is a second component that we have had, that we have talked about with CREW devices. Vehicle survivability; the individual soldier protection. The convoys that move back and forth are either in an up-armored Humvee or they are in an MRAP. The commanders decide the distribution of that. The other thing that we have done is we have put the armored security vehicle out there, in helping escort these convoys.

So, you know, soldier protection, the vehicle survivability and IED detection, and just having a knowledge of what is going on on the battlefield of the threats.

And, last, it is training. And you can never be satisfied with your training levels. That is what I have learned as a professional. And you never can believe your own publicity. And you have to constantly take those lessons learned and integrate them in our training centers.

Mr. VISCLOSKY. And how has the training evolved, General?

General THURMAN. Sir, what we have done, at least in the Army, at our three major combat training centers at Fort Irwin and at the Joint Readiness Training Center down at Fort Polk and the Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany, our joint multinational training center, we do extensive convoy live fire, role players, use of contractors against uncooperative irregular threats, if you will. And we have issued a lot of convoy planning tools that have been distributed widely across the Army.

I think we have done a lot. And we learned a lot, making sure that we have the right basis of issue in terms of equipment, how we equip our logistics formations.

General FLYNN. Sir, the key thing is, it all starts first with individual training and combat skills, and then we move to unit training. The key part is all our units, before they deploy, have to get certified through their predeployment training. You actually get a report card, if you will, or an evaluation of how effective your unit is in an immersive environment. And we actually do it all live-fire, so we know if you can handle the situations.

Like General Thurman said, improve situational awareness on the battlefield, knowing where everybody is, and also knowing what threats you are likely to face. Better mission planning before you go outside the wire and execute those logistics support missions. And improve survivability on the vehicles, and also enhancements to those vehicles in terms of not only survivability but also our weapons mix in that, and also the addition of CREW devices to the systems that counter the IEDs.

So it has been a comprehensive approach, and it is one that we test before they leave here to make sure they have what it takes to survive.

COUNTER SNIPERS

Mr. VISCLOSKY. If I could ask about countering snipers, too, which obviously can disrupt operations, could you address what technology-based solutions are currently being used? And, again, getting to the issue of training, situational awareness, any changes in evolution that has taken place, as far as countering snipers?

General FLYNN. Sir, there are two approaches to countering snipers. One is pre-shot, and the other one is post-shot. The best counter to a sniper is another sniper. And we make sure that we train our snipers to be the best and most deadly on the battlefield. And they are. The pre-shot deals with enhanced optics for your observation skills. Post-shot, we are looking at technology for muzzle flash and also for different acoustic devices on the battlefield.

So it is a multiple approach to counter sniper but one that, again, starts with the basics of training and basic observation

skills. But we leverage technology in the areas of optics and acoustics.

Mr. VISCLOSKY. Could I just ask, is it a growing problem? Has it always existed? Is it static, as far as incidence? Is it diminishing in Iraq and Afghanistan? I don't want to make an assumption either way.

General FLYNN. I am not sure if it is—I think snipers on the battlefield will always be a challenge. And I think it will be situational-dependent. And one type of area where you are operating could be the best place for a sniper to operate. So the enemy is going to try to take advantage of that situation. And we have to do all that we can to maintain the advantage over the enemy where we think snipers are likely to operate, sir.

General THURMAN. Mr. Chairman, what I would tell you is, for counter-sniper, what we have done in the Army, similar to the Marine Corps—it is just something I think we will have to see in the future and on any battlefield—but what we have done is we have employed the acoustic gunshot detection system Boomerang and the gunshot detection C2 system on some of our platforms. We have used closed circuit televisions.

And I agree that, in order to defeat a sniper, you need to have more snipers on the battlefield and awareness of the enemy. The SWAT system, which is individual gunshot detection, we have fielded in Iraq right now today roughly 350 sets. We just put 100 sets with the 56th National Guard Brigade Stryker that deployed. The use of binoculars, thermal imagery magnifiers. The measures such as just veils and protection.

The other system that we have put in theater is a Common Remotely Operated Station (CROWS) system, which is to protect the gunners on our combat platforms. It has been integrated on the M1, the up-armored Humvee. I had the opportunity to test that, when it first came out in Baghdad. So you can mount, obviously, all your machine guns or your MK–19 grenade launcher.

So it is a combination of those types of technologies. But, more importantly, it gets back to training levels and awareness of the environment you are operating in. And I can't overemphasize that.

Mr. VISCLOSKY. Thank you.

Mr. Young.

Mr. YOUNG. No more questions.

Mr. VISCLOSKY. Mr. Dicks.

Mr. DICKS. No further questions.

Mr. VISCLOSKY. Mr. Frelinghuysen.

BLUE FORCE TRACKING

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

That CROWS system is pretty neat and pretty important. Thank you for mentioning it.

Just a comment. On the blue force tracking, this is sort of a work in progress, isn't it? You invoked the blue force tracking system as if it was complete. Hasn't it been worked on for 4 or 5 years?

General THURMAN. Well, I will let General Thompson talk about the system itself.

Mr. FRELINGHUYSEN. I sort of got the feeling that it is not totally mature.

General THOMPSON. That is correct, Congressman.

Mr. FRELINGHUYSEN. I think it is important to know. I mean, we have issues of the enemy doing things to us, but, in reality, we have so much of our own equipment over there, we are potentially jamming our own ability to communicate.

General THOMPSON. But on all our systems, not just blue force tracking. But we are constantly upgrading those systems based on the changes, if the technology is available, the threat materializes. We go through a change proposal, an engineering change proposal process. We do software upgrades for software-intensive systems. And so, depending on what system you are talking about, you could be in multiple versions of software. But that is just part of the normal acquisition process in response to the requirements.

Mr. FRELINGHUYSEN. For the record, I would like to get for the Committee a description of where we stand relative to the various technologies that are included in that system.

General THOMPSON. In the blue force tracker?

Mr. FRELINGHUYSEN. Yes.

General THOMPSON. Yes, sir.

[The information follows:]

The Force XXI Battle Command, Brigade and Below (FBCB2) Blue Force Tracking (BFT) system has been a major combat multiplier since its introduction to our combat formations in 2003. Since first use in Operation Iraqi Freedom, Program Management FBCB2 has fielded over 70,000 BFT systems to Active, Guard, and Reserve components. FBCB2–BFT is the primary ground and air platform battle command system for our joint forces. It provides Situational Awareness (SA) information (where am I, where are the friendly forces, where is the enemy?), and Command and Control (C2) messaging between our platforms, remote tactical operation centers, and headquarters locations.

There are several reasons why our Soldiers and Marines continue to request more systems: (1) ease of use, (2) supports their mission across extremely large operational areas, and (3) provides reliable communications, even with all the other electronic equipment on the platform. Feedback from Soldiers and commanders in theater indicates that BFT is often the only means they have to communicate beyond line-of-sight while on the move in remote, high threat environments. PM FBCB2 implemented an accelerated design, development, production, and fielding of a BFT capability that does not interrupt existing Counter IED capabilities. The key to ensuring these remain an enduring capability is close collaboration with the organizations that provide Counter Remote Controlled IED (RCIED) Electronic Warfare (CREW) capabilities. Furthermore, BFT provides the ability to communicate using free text messaging with anyone else who has BFT, regardless of whether they are different units, ground or air, Army or USMC—it does not matter.

While BFT is a critical enabler in its form today, there are additional critical areas that are addressed in our Joint Capabilities Release (JCR) software development. The FBCB2 JCR software will include the application that incorporates these capabilities in the following paragraphs. Government acceptance testing commences early May 2009. In August 2009, we will conduct testing to ensure software interoperability with other Army and joint warfighting systems. The FBCB2 JCR will be postured to begin fielding after a successful operational evaluation in April 2010. Capability will include but not be limited to the following improvements:

1. *Simplifying the Database*. FBCB2 JCR will allow users to start up and join a network with minimal pre-configured information, and then to send "Self Descriptive SA" to share address book information with others (like address, role name, alias, map symbol code and task organization) to support SA and C2 messaging. With JCR, networks will no longer be related by hierarchy, are extremely simple to plan, and are not affected by task reorganization.

2. *Securing the network*: Achieving a Secret L-band capability is one of the most sought after improvements requested by our Soldiers. We have developed a technical solution to achieve this using the Programmable In-line Encryption Device (short title KGV–72). This capability prevents unauthorized exploitation of BFT data while in transit over the network, and is scheduled to be fielded with the JCR

software as part of the Army's Battle Command Capability Set beginning in FY11/12. Fielding will be in accordance with Department of the Army priorities.

3. *Improving the speed of the L-Band network*. PM FBCB2 will complete the development and testing of the Blue Force Tracker 2 (BFT 2) satellite network/transceiver in FY 10, and will insert this widely-requested capability into the Battle Command Capability Set FY11/12 baseline once ready. BFT 2 will provide update rates (increased position accuracy) and enable the distribution of more tracks to meet the additional FBCB2 fielding density. This greatly improved bandwidth (over 10 times greater) opens the possibility of pushing other types of data down to our platforms across the battlefield. The BFT 2 Satellite Network Upgrade Program will expand the performance, capacity and capability of the FBCB2 satellite communications network.

4. *Improving the hardware*. PM FBCB2 has had great success with maintaining a reasonable pace with the commercial computer market. We have started fielding ruggedized platform computers with dual core processing capability, two times the random access memory, and four times the hard drive capacity. We continue to improve the performance of our system while continuing to reduce the cost per platform. Furthermore, we are engaged with other project offices, exploring ways that we can leverage common computers, and looking for ways to reduce the number of unique systems on our tactical platforms.

MRAP TRAINNG

Mr. FRELINGHUYSEN. I, sort of, wanted to get a question on—you know, everybody loves the MRAPs, and obviously they have done a remarkable job in saving lives—the training aspect.

I think before testimony before the House Armed Services Committee back in January, I understood that the Army had only filled 4 percent of its vehicle requirements for training. Was that accurate? And if that is accurate, has that been improved considerably?

General THURMAN. Yes, sir. First off, that was accurate. We made a conscious decision to push all the MRAPs forward, so we had the protection first. And then we knew all along we would have to make up a training requirement.

Currently, the requirement is for 702 full-up MRAPs to do training. We have also——

Mr. FRELINGHUYSEN. But in terms of actually—those who are qualified. You know, this isn't driving a Humvee. You know, this weighs a billion tons. There are not too many people that are capable of doing that. I just sort of wondered where the Army stands relative to those that are qualified to actually run the vehicles.

General THURMAN. Well, we license those soldiers to make sure that—obviously, they have had the required training. That is documented. It is documented with the units.

Mr. FRELINGHUYSEN. I asked the question, if we are sending 1,800 into Afghanistan—and the picture I have is MRAPs stuck in the mud, and then you have to use a vehicle of a similar weight to pull them out, because there are so few roads over there. And then there is the issue of rollovers here. There have been considerable rollovers. I assume that has something to do with lousy infrastructure, either in Iraq or Afghanistan. In Afghanistan, you virtually don't have any, other than the roads we have built.

Are the people trained that are using these vehicles, as well as the new ones?

General THURMAN. Yes, sir. Currently, the Army is fielding a drivers trainer, a common drivers trainer with interchangeable cockpits, if you will. And then we are doing a rollover egress train-

er that we will push forward, that, if the vehicle rolls over, there will be a trainer. And that will be in Iraq and in Afghanistan.

Mr. FRELINGHUYSEN. The issue for me is training requirements. How many people are qualified?

General THOMPSON. Sir, we won't let—not just on MRAPs, but we go through a licensing process for every type of vehicle in the Army's inventory. And so you get the training that you need to be able to operate that vehicle, whether it is a tank, an MRAP, a Humvee, a Bradley fighting vehicle.

To the specific numbers on MRAPs, we have, because of what General Thurman said, we pushed the vehicles forward because we wanted the protection there as much as possible. We now have 25 of those vehicles in the training base in the United States, another 25 en route. And the total requirement of the training base is the 702 that General Thurman alluded to.

We have got common driver training, simulators. The requirement is for 20 of those; seven of those have been fielded to date. Rollover trainers, the requirement is for 25; five of those were shipped to theater this month. And we know where we want to put the other 20. So we are putting them where the soldier population is greatest, and so that the soldiers that are on orders to deploy get to learn and experience that vehicle in a simulation training environment.

Mr. FRELINGHUYSEN. So there is some lagging in training. And do the training hours match what the Marines are doing? Marines are required to drive 125 training miles. I mean, do you match what the Marines are doing, in terms of their training requirements?

General THOMPSON. I don't know the answer to that question. We would have to go back and look at the hours and the types of training.

Mr. FRELINGHUYSEN. The bottom line for me—you know, we may be exiting from Iraq. We are moving more MRAPs into Afghanistan, and their use is limited because of the lack of anything to drive on. And I just wondered whether the people that are going to be using those MRAPs are—if you have enough backup. Can you get it for the record, if we don't have it here?

General THOMPSON. From my perspective, the way I would answer that is that you want to do more training rather than less training. And so the availability of vehicles and the availability of the simulator trainers and the rollover trainers is lagging a little bit from what we would like to see. You want more actual hands-on training done and more simulation training done. And we have both the systems being fielded and the money to be able to do that today.

Mr. FRELINGHUYSEN. You have the money?

General THOMPSON. We have the money to do that. That is the issue.

General THURMAN. Congressman, if I may, also we did field some surrogate trainers at our combat training centers. We took some of the five-ton vehicles and we modified them to try to get ahead of the training issue.

Mr. FRELINGHUYSEN. Thank you, gentlemen.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Dicks.

Mr. DICKS. Is the training done in Kuwait? Or where is it done?

General THURMAN. Congressman, for the folks going into Iraq, they train in Kuwait, and then we do new equipment training in Afghanistan. That is why it is important, at least that is from the Army. As we get more trainers, we want to put them out at certain installations so we can catch up with this.

Mr. DICKS. So they are in Kuwait, and then they go into Iraq. Are you going to use Kuwait for Afghanistan, as well? Did I hear you say that?

General THURMAN. They need to do the new equipment training in Afghanistan.

Mr. DICKS. And then we are going to get some so we can do some equipment training in the United States?

General THURMAN. Yes, sir, that is how we are doing.

JOINT IMPROVISED EXPLOSIVE DEVICE DEFEAT ORGANIZATION

Mr. DICKS. Okay. Let me ask you this: How do you work with JIEDDO, with General Meigs?

General FLYNN. Sir, I work very closely with them, sir. The Marine Corps warfighting lab works for me, and we are directly linked to JIEDDO on a daily basis.

Mr. DICKS. It looks like, when I just saw the briefing, the numbers in Iraq are coming down rather dramatically, of IED attacks, but they are going up in Afghanistan. Is that how you see it?

General FLYNN. Sir, in the latest data I saw this week, that is true. But, also, our force levels are going up. And when you track the data, because our force levels are going up, there is a relationship. For example, the Marine Corps, we just went back to Afghanistan, so our encounters with IEDs are going up right now. And it is on an upward trend, and it is on an almost near-zero trend in Iraq right now. So, as we are meeting with the enemy, sir, we are seeing them employing IEDs.

Mr. DICKS. General Thurman, do you have anything you would like to add to that?

General THURMAN. I would just add to that, Congressman, that is exactly what we are seeing in the Army. And what you have to worry about are those areas that maybe you haven't been in.

Mr. DICKS. Yeah.

General THURMAN. And that is where you really have to pay attention there, because you will stumble onto something there if you are not careful. But that is what I would tell you. But I have been watching—you know, I watch IEDs every day. But we work very close with General Meigs.

Mr. DICKS. I liked what the General said here earlier, that it takes a multitude of technologies. It isn't just one silver bullet on this in this IED world. And I think the JIEDDO thing has been a big success.

And the other thing that was interesting about the briefing, this isn't just Iraq and Afghanistan. This now is a worldwide event that we are going to have to work with our allies and friends around the world in adapting to. We have been very fortunate that we haven't had attacks like this in the United States, but in other parts of the world, it is a pretty common occurrence.

General THURMAN. Yes, sir.

Mr. DICKS. Thank you.

Mr. VISCLOSKY. Mr. Kingston.

CH–47F CHINOOK

Mr. KINGSTON. Thank you, Mr. Chairman.

General, I wanted to ask you about the CH–47F Chinook helicopters, again, that the Guard uses. I understand they are 28 short. And I was wondering what a statistic like that really means, when they say 28 short. They are asking for a plus-up in the budget of six, and I just wanted to get your opinion on that.

General THURMAN. From the requirement perspective, we are short some aircraft. One thing, since the start of the war, in terms of the combat losses, actual combat losses, we have lost 112 aircraft. That was my latest account. And then you add on the attrition, so it takes you up to about 100. That is not CH–47s. That is all aircraft. And, to date, for the combat losses, we have had about 28 return—we have had 28 returned, for an all total of 40 when you look at what has been washed out or from a safety standpoint.

We do not have all the aircraft we need right now, due to losses and that. And when we went through the aviation transformation, we reorganized inside the reserve components and the Army to make our combat aviation brigades more capable. So what we have done is we make sure that the units that are going into the theater are full up. That is how we manage aircraft. And we work close with the National Guard Bureau and the Army National Guard to make sure that they have what they need.

We can get you the complete laydown on CH–47s, and I would be happy to do that, of the total requirement of where we are headed with the CH–47F. And I can take that and show you by State.

[The information follows:]

The Army has a requirement for 489 CH–47 aircraft. It is now modernizing from the CH–47D to the CH–47F and will complete this by 2018. Today, the Army has 457 CH–47 on hand. This includes 56 MH–47 for Special Operations, 63 CH–47F, and the remaining 338 aircraft being CH–47D. Of the 338 CH–47D, 29 are currently inducted to the remanufacturing line and will be returned as new CH–47F. Seven CH–47D aircraft are at Corpus Christi Army Depot and will be returned as recapitalized, like-new, CH–47D.

The Army National Guard and the United States Army Reserve have a requirement for 195 CH–47 aircraft. This includes 159 aircraft in the National Guard and 36 in the Army Reserve. Both the Army National Guard and the United States Army Reserve requirements are authorized for units that in many cases are spread across several states.

The Army National Guard maintains CH–47 units in 24 states. The Guard resources units to 100% of authorization one year prior to mobilization. Deployed units have their full complement and this includes Pennsylvania, Connecticut, Illinois and South Carolina with six on hand of six required; Texas and Oklahoma deployed with one extra aircraft above their 6 required to meet mission requirements. Alabama, Georgia and Washington have 6 of 6 as they prepare for deployment. California and Hawaii have 10 of 12. Oregon and Mississippi have five of six. Nebraska, Colorado, Florida, Iowa, Minnesota, Ohio, Michigan, Nevada, and Montana have four of six. Maryland and New York have three of six.

The United States Army Reserves maintains three CH–47 companies: one in Fort Lewis, WA, one in Fort Eustis, Virginia, and one company split between Olathe, Kansas and Fort Carson, Colorado. Currently, the company from Fort Lewis is deployed with eight of its 12 aircraft. Two of its remaining four aircraft are at Corpus Christi Army Depot and Fort Carson, Colorado.

Mr. KINGSTON. If we requested the plus-up of six in the fiscal year 2010 budget, is that something you would support? Or how would you feel about that?

General THURMAN. Sir, as a G–3, I need to go back, because the budget from DoD has not been sent out on fiscal year 2010. And so I would have to go back and just look at what the total requirement is on what you are asking specifically, on the six.

Mr. KINGSTON. One reason why their request caught my attention is yesterday we had a hearing where we discussed the average weight of an infantry soldier right now is 93 pounds, in terms of the fully equipped rucksack and everything that goes on him. And, you know, particularly in Afghanistan where you have such rugged terrain and mountains and so forth, it would appear that those Chinooks would be very helpful in terms of lightening the infantry load.

General THURMAN. Yes, sir. And we are, in fact, increasing aviation in Afghanistan just for those reasons. Helicopters are one of the most high-demand items that comes in to me as a requirement.

Mr. KINGSTON. Well, I would love to get your opinion on it, particularly the fiscal year 2010 budget.

General THURMAN. Yes, sir.

Mr. KINGSTON. Thank you.

Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Bishop.

MEDEVAC

Mr. BISHOP. Thank you very much.

I would like to talk about medevac, if you will, for a moment. In January, before the House Armed Services Committee, Secretary Gates addressed the difference in medevac response times in Iraq and Afghanistan. And of course he said the goal in Iraq was to have a wounded soldier at a hospital in an hour and, in Afghanistan, close to 2 hours. And he directed that there would be an increase in the number of medevac helicopters and medical professionals that would be assigned to Afghanistan.

What were the shortages in medevac assets in Afghanistan that he identified? And what additional assets, both medical and aircraft, have actually arrived in Afghanistan since that time, and what is on the way? What is the average time to evacuate a soldier now in Afghanistan?

And we understand that certain combat search and rescue aircrews have been reconfigured to help with the medevac problem and the shortfall. What are the pitfalls of taking the combat search and rescue aircrews and assigning them to this medevac, as opposed to their search and rescue functions? And that would be of interest, of course, to Mr. Kingston. He represents Moody Air Force Base, which does significant search and rescue. And have those search and rescue operations been helpful in Afghanistan to solving the medevac shortfall?

General THURMAN. Congressman, we have done extensive work with the Marine Corps, as well as the other services. You know, this is a joint war, down in Afghanistan, and we need to use all joint assets that are available to extract our people off the battlefield in a timely manner.

We are going to put more medevac aircraft, at least from the Army side, into Afghanistan. You are correct, we were not meeting the standard. But, you know, it is the size of that country, as compared to Iraq, is considerably different. I equate it to Texas versus West Virginia, about that size.

That said, what we are trying to do is look, also, with our forward surgical team capability, to put more of those assets in, so you can quickly treat a soldier, Marine, airman, sailor, or whoever is out there, contractor, in a quick manner. We are not there yet, on dropping that down to an hour. But we are serious about this. We need to use all assets that we have in there, is what I would tell you in this environment.

General THOMPSON. I think the exact numbers, I mean, the forward surgical teams, is about a 40 percent increase that is going to go into Afghanistan. And the numbers of medevac aircraft that we plan on putting over there is about a 75 percent increase over there today.

Mr. BISHOP. What is the timeline on that?

General THURMAN. Sir, we are working that right now. We are talking in the next 30 days, as we work that.

General FLYNN. Sir, on the medevac, we have changed our force deployment posture. At the beginning of the year or just prior to the beginning of the year, we only had an infantry battalion over there. We have now since changed, and we are actually deploying our air assets with it.

And, just like General Thurman said, it is not just the air assets. It is also the level-two surgical care. So we are doing a number of things.

And, you know, for the record, in a classified setting we can give you the medevac laydown of where are all the different aspects of the care, is I think is the best way to answer the question for you now, sir, as well as what is going on now and what is projected for the future to be in theaters.

[The information follows:]

This is a more complex situation than we have faced in Operation Iraqi Freedom; and as such, we are ensuring that we get it right on behalf of our Soldiers. I will have my staff coordinate with your office to provide you a detailed classified briefing on MEDEVAC operations in Operation Enduring Freedom at first opportunity.

Mr. BISHOP. But basically medevac for Marines is provided by the Navy.

General FLYNN. No, sir.

Mr. BISHOP. You are doing it jointly?

General FLYNN. Army, Marine, Air Force, you know, sir, they are all part. When you see the medevac laydown, it is a number of assets that do it, just like the hospitals.

Also, it is coalition, as well, too, sir. Because in the areas we are working, a lot of the areas that we work are under the control of our NATO allies. And, in some cases, that is where the medevac and the medical treatment facilities are, as well, sir.

General THOMPSON. A wounded service member is a wounded service member. So they get cared for or medevac'ed, if necessary, by whatever asset is available.

General THURMAN. Congressman, we would be very happy to come over and give you a complete medevac briefing, and to any

of the other members, on exactly what we are doing in Iraq and Afghanistan.

Mr. BISHOP. I would love to have that, sir.

General THURMAN. But particularly in Afghanistan.

Mr. BISHOP. Thank you.

Thank you, sir.

STRYKERS

Mr. VISCLOSKY. Thank you very much.

Gentlemen, the Army recently notified the Committee that the Stryker order was being modified and that 270 medevac variants would be changed to other variants, such as infantry combat vehicles, in order to establish a Stryker brigade combat team equipment set in Afghanistan.

I would have two questions on the situation. The first is, will the Army request funds to replace the 270 Stryker medevac vehicles that were deleted from the order? And secondly, what is the Army's overall strategy and timeline for replacing the M–113s and heavy brigade combat teams with updated vehicles?

General THURMAN. First off, Mr. Chairman, we did do that, because, to answer the Stryker question upfront, you know, we are moving a Stryker brigade combat team into Afghanistan. We have not done that before. So what we are doing—you know the Lines of Communication, the ground LOCs? It takes longer to get equipment into Afghanistan rather than coming in from Kuwait and driving into the next country over. So to cut down on the need for a strategic area, we need to establish a theater-provided equipment base, because we see Strykers being replaced in Afghanistan. That was requested by the theater commander.

So we needed more Strykers, in this case. We believe we can use the MRAP amulets and integrate that in the Strykers. So that is what we think we need to do so we can establish theater-provided equipment over there. And we can get you the exact requirement on that, in terms of funding, of what that would be.

We do have a strategy to replace—we do need to replace the M–113s. And that is part of our overall strategy in the Army, that we would be happy to lay that down for you, too, and show what you we are trying to do here with that. Because that vehicle, frankly, will not survive in this environment.

[The information follows:]

We are working closely with the Office of the Secretary of Defense on a strategy to replace our aging fleet of combat vehicles, which includes the M113. When the budget is released, we will be able to discuss where we are in the deliberations to date. More generally however, the Army's modernization strategy is focused on building a versatile mix of mobile, networked BCTs that can leverage mobility, protection, information, and precision fires to conduct operations across the spectrum of conflict. As part of that effort, we will institutionalize a full spectrum set of Mine Resistant-Ambush Protected (MRAP) vehicles that incorporates MRAP and Up-armored HMMWVs (UAH) into our formations. We are also conducting a holistic review of the capability requirements for our combat platforms, focusing on the wartime lessons learned by Soldiers, commanders and the Joint community that are applicable to our current and near future operations.

Mr. VISCLOSKY. So you will have a request for funds?

General THURMAN. That is being worked in the building right now. And I don't have all that with me right now, exactly what that would be.

General THOMPSON. If I can just add to that just a little bit, so what General Thurman is describing, if you are going to put a Stryker brigade into Afghanistan, very difficult to get vehicles into theater. So once you get them there, you would like not to have to send another Stryker brigade in and send it in with its vehicles. So the vehicles that will go there will be left behind in the theater and maintained in the theater.

The diversion of assets from the planned production of 200 medical vehicles to something else—and that is the plan that is being worked for approval inside the Pentagon right now—is to then convert those vehicles to the other vehicle configurations, so when that unit that is going over there comes back, they can come back and have an equipment set that they can train on. Because it is our plan that there will be an equipment set that is left in theater for a while for Stryker units to fall into.

We will integrate that into the force structure. There is going to be battle damage and losses to those vehicles. But that is being worked right now. And that was the genesis or the reason for the request to divert those assets from one type of vehicle to another.

Mr. VISCLOSKY. And for the record, you will provide more information on the replacement program for the 113s then?

General THURMAN. Yes, sir.

Mr. FRELINGHUYSEN. If the chairman would yield?

Everybody likes to be in the Stryker brigade, but Stryker vehicles like roads as well. They prefer, you know, what we call normal roads.

What are their capabilities in Afghanistan, given what we have with the weight problems with MRAPs? And, obviously, the Stryker vehicles have a degree of vulnerability, as remarkable as they are, that the MRAPs don't have.

So on the issue—and maybe you want to put it in for the record—you know, what are the limitations if we are going to move, you know, the Stryker brigade in there on these vehicles, given just the topography, terrain, and lack of infrastructure?

General THURMAN. Congressman, we can give you more information on this. But what I would tell you is, the theater commander asked to use those in certain areas, because he felt he needed the mobility and the infantry capability.

[The information follows:]

Like MRAPs, or any other heavy vehicle, Strykers have mobility limitations. Steep mountainous terrain with unimproved roads present challenges to the Stryker's maneuver capability. Aware of these limitations, the theater commander requested that a Stryker Brigade Combat Team (SBCT) be deployed specifically to Regional Command South in Afghanistan where the terrain is more suitable for Stryker maneuver.

The SBCT is a full-spectrum, wheeled combat force designed and optimized primarily for confronting low-end and mid-range threats that may employ both conventional and asymmetric capabilities—like the threat we are facing in Afghanistan. The SBCT's capabilities differ significantly from those found in traditional brigades. In addition to its three infantry battalions, the SBCT has a cavalry squadron for reconnaissance, surveillance and target acquisition (RSTA), a brigade support battalion, a field artillery battalion, a military intelligence company, an engineer company, a signal company, an anti-tank company, and a headquarters company. This mix of capabilities allows the SBCT to cover a larger operational area and to provide

greater firepower than an Infantry Brigade Combat Team (IBCT). Additionally, because of the common chassis in its formation, the SBCT allows a smaller sustainment footprint than a Heavy Brigade Combat Team or an Infantry Brigade Combat Team outfitted with multiple variants of MRAPs. This is vitally important considering limitations on our lines of communications in Afghanistan.

Mr. FRELINGHUYSEN. They sure are. I am just worried about the ability of vehicles getting from point A to point B.

General THURMAN. Yeah, I think the terrain—and I don't want to get into the operational employment of what he intends to do. I think we will support what he is trying to do over there for that particular capability. It is a valid concern, with the concerns you brought up. But we can show you that.

All of them have slat armor on there. We will equip them the same way we do in Iraq. But there are mobility challenges, depending on where you are in Afghanistan. But we can show you that in more detail, if you would care to have that.

Mr. FRELINGHUYSEN. Okay. Thank you, General.

Thank you, Mr. Chairman.

General THOMPSON. And I think—and I am not the operator here; I am the acquisition representative. But I think that the theater commander asked for that Stryker brigade and will put that Stryker brigade in places in Afghanistan where the unit capability is maximized.

Mr. FRELINGHUYSEN. I want you to strut your stuff. But, in reality, I want to make sure, if we get Stryker vehicles over there, that they can be, you know, as best we can, widely used. And since we don't own the whole country, you know, we are somewhat limited in the areas which we have responsibility for. It would be interesting to know how we are matching, you know, our ability to maneuver on what you and I would call roads, of which they have very few, and what they call, you know, highways.

Thank you.

Mr. VISCLOSKY. Mr. Bishop.

MRAP COMPATIBILITY TO AFGHANISTAN

Mr. BISHOP. Thank you.

Gentlemen, we have talked a lot about MRAPs today. But one thing for sure is that they are pretty huge vehicles. And throughout the services, I think about 11,000 of them being used in Iraq, 2,000 to 3,000 in Afghanistan, and a lot more being used for training.

For each of the services, could you tell me, with the troop levels coming down in Iraq in the coming year and the lack of MRAP compatibility to the Afghanistan terrain, and since they are expensive to transport and operate, what are you going to do with the MRAPs in Iraq following our withdrawal over there, or, I should say, our redeployment from there? Will they be kept in Kuwait to be a part of our prepositioned equipment set?

Will the U.S. retain all of the remaining MRAPs, or will a portion of them be allocated to foreign military sales? I know that there are some plans on the shelf, ready for execution on command, for moving some of the equipment back.

But, you know, for each of you, what is it that you are going to be doing? And how much is going to stay? How much is coming

back? And is it possible, fiscally, for us to move all of this expensive equipment back, logistically?

General FLYNN. Congressman Bishop, we own about 2,200 MRAPs. What we are going to do is we are going to take about 800 of them and they will remain in the operating forces. And then the remainder we are going to return to our prepositioned stocks.

So that is our basic plan right now. It is still being refined. But that is where we are right now in the planning process, sir.

General THURMAN. Congressman Bishop, depending upon how long we are deployed, obviously there is a requirement for MRAPs as long as we are deployed, whatever those troop levels end up being. So they will stay forward with the units.

What we are going to do if the demand drops down, we have already documented 1,400 into our route clearance companies that we intend to document in the force structure.

Mr. BISHOP. What does that mean? That means preparing them to bring them back home?

General THURMAN. Yes, sir. We are going to bring a number of these back, and we intend to integrate them into our force structure. And we are working that right now inside the Army, in our force structure.

There is a requirement right now for approximately 702 MRAP training vehicles. And then there is another requirement to be pushed into our—and replenish our Army prepositioned stocks that we have that would be forward deployed in Kuwait, in this case.

And then we have looked to put some in the enabling formations, our logistics formations, to include, like, the sustainment brigades for command and control purposes. We have fires brigades, C2. So we can give those the level of protection in there that they would need.

And so we are working right now, working with our Training and Doctrine Command, and seeing how we document these vehicles and put them in the actual force structure as a requirement.

Mr. BISHOP. What about Guard and Reserve? For training purposes? Is that included in the 700 that you put in for training?

General THURMAN. Yes, sir. There are X number going to Camp Shelby, Camp Atterbury, around to our mobilization sites that we have in the Army.

But when I speak of total Army requirement, I talk for the Army, the Army Reserve, and the Army National Guard.

Mr. BISHOP. One of the concerns that the National Guard, in particular, has is that they have not, in the past, had sufficient equipment on which to train and, when they were called up, were only able to get abbreviated training on the equipment that would be used. And, of course, the MRAPs were fairly recent. And initially, when they were deployed, they didn't have those, didn't have training on them. The result was a lot of accidents, rollovers and the like, because they weren't adequately trained on it.

How will the Guard be assured of getting the actual equipment on which to train so that, in the future, we don't have those kinds of injuries and accidents?

General THURMAN. Congressman, we will make sure that, for instance, we have done extensive work and improvements on Guard equipping. First off, we will make sure that they have the required

equipment and not outdated equipment to do the homeland defense mission that they have to do with their Title 32. We call that dual-use equipment. I think you are familiar with that.

Mr. BISHOP. Right.

General THURMAN. And then what we make sure of on every unit that is going to deploy, we treat them no different from an active unit. We make sure that they have every piece of equipment that they need prior to deploying. We make sure of that in the Army. So they can do the required training.

Mr. BISHOP. Because even the active-duty Army, as far as the most recent engagement with Iraq, have not had the actual equipment, the most updated equipment for their pretraining, and they didn't get it until they went to the desert, just prior to deployment. And that was limited, because that was a limited exposure. Whereas if the back sets were at home, they could train on them constantly as a part of their reset and their dwell time.

General THURMAN. What we are doing in the Army today, we manage on our equipment readiness through the Army force generation process. And we have established an equipping strategy that we are going to equip units to a certain level as they flow through this force deployment model. And we can show you how we are thinking about doing that, and we would be more than happy to do that.

Mr. BISHOP. Okay. You did not mention—you mentioned the 700 and several thousand. But you have about 11,000 all together. You didn't respond to the foreign military sales. Are you going to put some of them up for foreign military sales?

General THOMPSON. I think that the planning right now is of the roughly 12,000 MRAPs, Army MRAPs, that, with the training and the prepositioned sets and in the force structure, we have accounted for using about 9,500 of those 12,000 MRAPs.

So we haven't gotten to the end-state yet on how we would use the other 2,500. Maybe some more of those would go in the force structure. But that is the ongoing analysis. So that is the rough math.

Foreign military sales or leaving some of them behind with the Iraqi forces is certainly a possibility. We haven't done any of that yet. There are no foreign military sales cases pending today that I am aware of related to MRAPs.

But that is the rough math.

Mr. BISHOP. Thank you, Mr. Chairman.

Mr. VISCLOSKY. Mr. Kingston.

COMMENTS OF MR. KINGSTON

Mr. KINGSTON. Thank you, Mr. Chairman.

I just want to make a statement as much as anything. But, you know, this whole hearing, of course, has been about equipment, which, of course, that was its purpose. But we all know that the number-one asset is the individual soldier.

But one thing that frustrates me about today's military—and I understand the "Army of one" culture, which is, you know, a great concept. But sometimes you need a Chesty Puller or an Audie Murphy or a Jimmy Doolittle or a Eugene Fluckey to get a message across to people. And we don't ever talk about individual soldiers

in Iraq or Afghanistan unless they have done something wrong or, you know, there was a tragedy involving them.

Who are the school kids going to read about? When you are recruiting a 19–year-old, who do you get them to be inspired by if they don't know somebody personally who has been in Iraq or Afghanistan?

And does that bother you at all? Because I have talked to people about it, and they have said, you know, "Army of one, everybody is a hero," which is right. But I think, for all of us, when we go, you know, not just to Walter Reed but people who have not been injured—you know, there is a lot of heroes and a lot great stories out there, but we never get them out to the public. And I think that would be useful in terms of putting a face on the soldier.

And I know that is not your job description and not the purpose of the hearing, but I just wanted to mention it. I don't know if you can comment or not.

General FLYNN. Sir, like you said, I think all the men and women who wear the uniform of the United States are heroes in their own right. And I think they are an example for all of us, you know, for all citizens.

Just within the last month, I had the privilege of going to the Navy and Marine Corps Museum at Quantico. And the Secretary of the Navy awarded two Navy Crosses posthumously to the families of two Marines who manned their post in the face of a suicide vehicle coming to their checkpoint, which saved the lives of well over 50 individuals. And they stayed until they stopped the vehicle.

When you looked around in the audience there, there were a lot of Marines there, there were soldiers there, there were sailors there, and there were a lot of individuals who had served in the military. It was a publicized event, but that is who came.

So I think there is a message in what you are saying, is, you know, we do have heroes out there. Just this week I read in the newspapers about the Air Cross being awarded to an airman. I think it is one of the few times that the Air Cross has been awarded, you know, in recent times for heroism on the battlefield.

So those things are happening. It is just that sometimes they just don't seem to get the publicity that they should.

Mr. KINGSTON. If we can get it outside of the circle of those who wear the uniform and get it inside those who buy $2 coffees at the coffee shop, that would really, I think, be very helpful. And I don't—I mean, we all have a responsibility on that, I think.

General THURMAN. You know, Congressman, I think that is a very good point that you bring up. We can cite similar acts of bravery and actions on the battlefield of what our men and women do. And, as I always say, there is nothing more important than a soldier. You know, the experiences that I personally had in Iraq, as I walked in—just this morning, I got an e-mail from a soldier, specialist, who said, "Do you remember me? You came in the operating room and gave me a coin, and I have lost my coin. Can you get me another one?" And I said, "Give me your address, and it will be out today."

But the commitment that we have in this war, I think we need to probably make sure that everybody is aware of that. And, you know, we are all modest people because we care about this country.

And I think it would probably help this country more if we got that information out more.

Mr. VISCLOSKY. I thank the members.

Generals, thank you very much, each one of you, for your service and for those you command.

And we are adjourned.

[CLERK'S NOTE.—Questions submitted by Mr. Murtha and the answers thereto follow:]

COUNTER-ROCKET, ARTILLERY AND MORTAR (C–RAM)

Question. Starting in 2005 the Army began to deploy a land version of the Navy's 20 mm Phalanx Close-In Weapon System. The Army's version, the Counter Rocket, Artillery, and Mortar or C–RAM is a system used to destroy incoming artillery, rockets and mortar rounds in the air before they hit their ground targets. The system has been deployed to protect large fixed facilities in Iraq such as the Green Zone and Camp Victory.

Do both the Army and Marine Corps use the Counter Rocket, Artillery and Mortar System (C–RAM)?

Army Answer. No. C–RAM systems have been fielded to multiple Forward Operating Bases (FOBs) in Operation Iraqi Freedom (OIF) (Army, USMC, coalition) by the Army. FOBs with C–RAM Sense and Warn are manned Army personnel, and FOBs that also have the Phalanx Intercept capability are operated by a combination of Army and Navy personnel.

C–RAM Sense and Warn capability was initially fielded to 4 United States Marine Corps (USMC) FOBs in Iraq where it was operated by U.S. Army personnel but integrated into the USMC Base Defense Operations Centers. Available USMC sensors at these FOBs (AN/TPQ–46 Firefinder radars) were integrated into the C–RAM system. As the threat was reduced, the 4 C–RAM systems at the USMC FOBs were relocated to different FOBs in OIF.

Additionally, while not fielded in Afghanistan, C–RAM has completed integration and testing with the USMC Hostile Artillery Locator (HALO), an acoustic detection system for mortars and artillery, and with the USMC SCAN EAGLE, an unmanned aerial vehicle with an electro optical sensor.

Marine Corps Answer. The Marine Corps does not currently have a capability similar to C–RAM or a shoot down capability against enemy indirect fire. In Iraq and Afghanistan the U.S. Army has responsibility for Forward Operating Base (FOB) counter indirect fire interdiction. The Marine Corps provides radar and sensor support for Army C–RAM at a number of FOBs. Currently there is no requirement for C–RAM in the Marine Corps.

Question. Please provide an overview of where C–RAM is deployed and describe its operation.

Army Answer. C–RAM is deployed to 15 Forward Operating Bases (FOBs) in Iraq. Three of these FOBs (Two U.S. and one coalition) have Intercept capability along with Sense and Warn capability. The remaining 12 have Sense and Warn capability only.

Sense. The operation of the C–RAM system is initiated by Sensing (detection) of a rocket or mortar round directed toward a C–RAM protected FOB by U.S. Army/Marine Corps indirect fire sensors: Lightweight Counter Mortar Radars (LCMR); Firefinder Radars (AN/TPQ–36, 37 or 46); Giraffe radars (foreign system); or the radar on the Land based Phalanx Weapon Systems (LPWS). Sensing of rocket and mortar rounds is performed at both C–RAM Sense and Warn FOBs and C–RAM Intercept FOBs.

Warn: Warning is the action controlled and implemented by C–RAM to warn personnel within the hazard area of incoming rockets and mortar rounds. Warnings are dependent on detection of incoming threats by the indirect fire radars. The Army/Marine Corps indirect fire radars report both the Point of Origin (POO) of the rocket or mortar round and its projected flight path. The POO and projected flight paths from the indirect fire radars are correlated by the C–RAM Command and Control (C2) system. To reduce the probability of false warnings that might be issued based on a false detection by an Indirect fire radar, correlation of data from two or more indirect fire sensors is required to validate that there is in fact a rocket or mortar round inbound (The radars on a large base may produce as many as 500 false detects a day). This correlation normally occurs within 6–8 seconds. If C–RAM C2 validates that there is an inbound threat, it calculates the predicted Point of Impact (POI), then identifies all of the audible and visual alarms required to warn per-

sonnel within the hazard area in the vicinity of the POI, and initiates a warning with just these essential warning devices. This localized warning ensures that personnel who are not within the hazard area can continue their work, while those in the hazard area seek protection. Warnings are typically initiated 10–20 seconds prior to expected impact. Warning is performed at both C–RAM Sense and Warn FOBs and C–RAM Intercept FOBs.

Response. Response is action taken to respond to an insurgent rocket or mortar launch crew with either lethal or non-lethal effects. Response is coordinated by the C–RAM systems through its integration with Army, U.S. Air Force (USAF) and USMC Battle Command Systems. Concurrent with validation of an inbound rocket or mortar round, C–RAM C2 reviews the POOs reported by the indirect fire radars and if necessary calculates a new POO. C–RAM C2 then provides the new POO to Army, USAF and USMC Battle Command systems. This information enables the Battle Captain to review the possible means for response (counterfire, quick reaction force, UAV, Army aviation, AF fixed wing aircraft, Electro-Optical/Infrared Sensors for Positive Identification, etc.) and then to select the optimum method of either lethal or non-lethal Response. Response is performed at both C–RAM Sense and Warn FOBs and C–RAM Intercept FOBs.

Intercept. For those FOBs that are equipped with an Intercept capability, the C–RAM C2 will also receive the location and track of any friendly aircraft in the vicinity from Sentinel radars. Concurrent with initiating Warnings and with providing POO to Battle Command systems, C–RAM C2 will calculate the location of the incoming round and send this information to those Land Base Phalanx Weapon Systems (LPWS) that are in a position to acquire, track, and destroy the threat. Those LPWS then acquire and track the round with their own fire control radars. The location and velocity of any friendly aircraft in the area is provided to LPWS, which use the location of friendly aircraft to calculate a dynamic "Do Not Engage Sector." This establishes a volume around each friendly aircraft location as it moves that precludes any firing that might endanger the aircraft. If the incoming round comes within range of the LPWS and engaging the incoming round will not endanger any friendly aircraft, the Engagement Control Officer will view the imagery from the LPWS Forward Looking Infrared (FLIR) camera and visually verify that the target is in fact a rocket or mortar round and that there are no friendly aircraft within the field of view of the FLIR. If he confirms this, the Engagement Control Officer will direct engagement of the incoming round by LPWS. The rounds used by the LPWS that do not impact with the rocket or mortar round self destruct, precluding lethal effects and minimizing effects on the ground. Intercept of rockets and mortar rounds is performed only at C–RAM Intercept FOBs.

Marine Corps Question. Please provide an overview of where C–RAM is deployed and describe its operation?

Answer. The Marine Corps does not have C–RAM. The Army should answer.

Question. Is C–RAM deployed to Afghanistan as well as Iraq?

Army Answer. Currently C–RAM systems are only deployed by the U.S. Army in Iraq. However the U.S. military headquarters in Afghanistan is reviewing a draft requirement requesting the fielding of C–RAM systems to multiple Forward Operating Bases in Afghanistan.

Additionally, a partner in the NATO command in Afghanistan has deployed a limited C–RAM Sense and Warn capability to one NATO Forward Operating Base in Afghanistan. There are currently no C–RAM systems deployed in Afghanistan by U.S. Forces.

Marine Corps Answer. Marine Corps does not have C–RAM. The Army should answer.

Question. How has C–RAM performed in Iraq and Afghanistan?

Army Answer. The C–RAM System-of-Systems has performed well in Iraq with over 800 timely and accurate warnings of incoming rockets or mortar rounds, with a success rate over 70 percent and over 100 successful intercepts of rockets or mortar rounds without endangering any aircraft.

C–RAM systems deployed in Iraq have averaged a greater than 90 percent operational availability rate.

The CENTCOM Deputy Commander identified C–RAM as a force multiplier that is saving lives and has recommended that C–RAM be transitioned from supplemental funding to the base budget.

There are currently no C–RAM systems deployed in Afghanistan.

Marine Corps Answer. Marine Corps does not have C–RAM. The Army should answer.

Question. Given that our fixed facilities are sometimes located in densely populated urban areas, how is collateral damage avoided?

Army Answer. Multiple procedures/hardware systems have been incorporated to prevent collateral damage by the C–RAM intercept systems fielded to three Forward Operating Bases in Iraq.

First, the C–RAM Interceptor, the Land Based Phalanx Weapon System (LPWS), uses ammunition that self-destructs after a fixed time of flight. Thus, rounds that are fired at a rocket or mortar round that do not strike the target self-destruct into small fragments.

Second, the C–RAM system has established minimum firing elevation limits (both physical and software) for each LPWS position. This ensures that any rounds fired that do not intercept the intended rocket or mortar round, detonate in the air at an altitude sufficient to ensure that any fragments falling to the earth do not cause any lethal collateral damage. The minimum altitude for this self-destruction was established based on testing by an Army test agency.

Third, physical and software cut-outs have been established and incorporated for each LPWS position, which precludes firing in directions where structures or other obstructions do not allow sufficient range for the bullet fly-out and safe self-destruction.

The Sense and Warn systems at 12 FOBs in Iraq are passive, thus there is no potential for collateral damage.

Question. Are sufficient C–RAM systems available for our deployed forces and for training purposes?

Army Answer. There are sufficient C–RAM systems to meet current requirements of the Warfighter in Iraq and to support training. We have and must continue to enhance system-of-system capabilities of deployed and training systems to address changing enemy tactics and evolving threats.

If C–RAM Sense and Warn requirements are validated for Afghanistan, procurement of additional C–RAM Sense and Warn systems will be required.

Marine Corps Answer. Marine Corps does not have C–RAM. The Army should answer.

DoD IG Findings Concerning the Marine Corps' Procurement of MRAPS

Question. In his testimony before this subcommittee on February 26th, the DoD Inspector General stated the Marine Corps Systems Command did not properly determine that contract prices were fair and reasonable when they awarded nine firm fixed price contracts for Mine Resistant Ambush Protected (MRAP) vehicles. The per vehicle price that the Marine Corps paid for Category I vehicles ranged from $300 thousand to $1.1 million. He further stated that the Marine Corps also did not obtain volume discounts from two contractors for orders in excess of 1,500 vehicles at an additional cost to the taxpayer of $90 million. The Director, Defense Procurement and Acquisition Policy, Office of the Under Secretary of Defense for Acquisition, Technology and Logistics, agreed with the IG's conclusions.

General Flynn, are you aware of the DoD IG's findings that the Marine Corps failed to establish fair and reasonable prices on MRAPs and failed to request quantity discounts? Would you comment?

While we understand that the Marine Corps sought to procure MRAPs swiftly, how do you justify the omission of an independent cost analysis?

Answer. Provided below:

1. Purpose. Provide the House Committee on Appropriations, Subcommittee Defense (HAC–D) with information, for the record, as to the Marine Corps' position on the Procurement and Delivery of Joint Service Mine Resistant Armor Protected (MRAP) Vehicles DoD IG Report—29 January 2009 (Report No. D–2009–046). On 10 March, LtGen George Flynn, Deputy Commandant of the Marine Corps' Combat Development and Integration, served as a witness before this committee. LtGen Flynn stated, he would provide "additional information, for the record, as to what we agree with and what we don't agree with in the report."

2. Take Away. Both the ASN(RDA) and the Marine Corps provided written comments to the DoD IG report and disagreed with a number of assertions in Finding C.

3. Key Points

The Marine Corps agrees with the following:

Finding A. Actions Taken to Accelerate Mine Resistant Ambush Protected Vehicle Delivery

• DoD IG concluded that the combination of actions executed to address the urgent need for accelerating the delivery of MRAP vehicles to theater was innovative and effective.

• The DoD IG found that Marine Corps System Command (MCSC) implemented aggressive contractual delivery schedules to meet the theater demand for MRAP vehicles as directed by the Secretary of Defense.

4. Recommendations

• The Marine Corps has incorporated the DoD IG report recommendation that future procurements for MRAP vehicles are properly competed or justified on a sole-source basis. Our acquisition strategies included this consideration for the MRAP II and sole-source award of MRAP CAT III procurements. MRAP-All Terrain Vehicle (M-ATV) prices for each part of the competition will be negotiated separately.

• MCSC has communicated to its contracting officials the importance of making price reasonableness determinations and ensuring cost or pricing data are requested. MCSC is building a framework for the price reasonableness determination that will be used for the M–ATV procurement. This procurement, though part of the overall Joint MRAP Vehicle Program, is being conducted by the U.S. Army Tank-Automotive and Armaments Command (TACOM).

• We will attempt to build sufficient flexibility into the production contract to deal with both planned and potential quantities. We also sought both step and cumulative quantity discounts as part of the Request for Proposals for the M–ATV procurement. An OSD Peer Review was conducted before the request for proposal (RFP) release, and a second Peer Review is being conducted during M–ATV source selection.

The Marine Corps disagreed with the following:

Finding C. Price Reasonableness Determination

• We disagree with the DoD IG report conclusion that the MCSC contracting officer chose an inappropriate contract type for the MRAP procurement. The Director of the Defense Procurement Acquisition Policy and Strategic Sourcing (DPAP), also agreed that firm fixed price was the correct contract type. He stated "The use of firm fixed price contracts would be perfectly appropriate if buttressed with the appropriate analysis to determine fair and reasonable prices." We believe our approach, vetted with OSD, was appropriate. We believe that the contracting officer reasonably determined that a fixed-price contract was appropriate for the MRAP procurement.

• We believe that MCSC netted actual savings of $127 million by negotiating bilateral contract modifications to produce more than the 1,500 vehicles that were originally contracted for in the base year. We purchased those vehicles at base-year price rather than option-year pricing. The difference between ordering at base-year rather than option-year pricing of 4,186 vehicles was $127 million. We understand the approach suggested by DoD IG. The DoD IG method suggests potential savings of $45.6 million by using volume discounts. We should have asked for an additional volume discount. We do not believe we would have received both discounts. We believe our method was a better investment for the government, as reflected in net actual savings of $127 million versus a hypothetical savings of $45.6 million.

• We believe the price range in the chart on page 25 is misleading. In January 2007, nine vendor proposals demonstrated potential to meet the program's overarching objective—field the maximum number of survivable, safe, sustainable MRAP vehicles in the shortest period of time—received contract awards to each deliver two CAT I and two CAT II for initial test and evaluation. We believed from the onset that "some" of the vehicles may not pass production verification and survivability tests, but we could not tell that definitively from the paper proposals. For that reason, it was decided that leaving any high potential producer that "could possibly" manufacture a survivable vehicle on the sidelines was an unacceptable risk when the Joint Forces had an urgent need for these vehicles.

Of the nine vendors, Oshkosh Truck (OTC), at $306,199, was the least expensive, but failed Limited User Evaluation (LUE); General Purpose Vehicles (GPV) was the most expensive at more than $1 million per vehicle, but was terminated for convenience because the company failed to deliver any test vehicles. GPV's paper proposal offered an enhanced maneuverability and mobility solution (the only vendor to offer this capability). GPV's contract award was terminated, and the entire $5.1 million was de-obligated. The unit prices on page 25 reflect unit pricing for a procurement order quantity of 1 to 200 vehicles. Approximately 95% of the MRAP vehicles actually procured were purchased at higher step ladder quantity pricing where unit price ranges did not range so greatly among the vendors.

• As of 16 March 09, MCSC has ordered 16,242 vehicles to meet DoD requirements. Of the five vendors that produced significant quantities of vehicles, the top vehicle unit price paid by the Government was $629,800 (for 75 vehicles); the lowest was $443,000, representing an average base variant cost of $507,860 with an average unit price variance across vendors of $112,891.*

*The actual average cost of a CAT I = $507, 728; the actual average cost of a CAT II = $508,472

• Ultimately, MCSC ordered large quantities of CAT I and CAT II vehicles from five fully qualified vendors. These manufacturers proved their ability to produce vehicles with the required production numbers and to deliver within established timelines.

JOINT LIGHT TACTICAL VEHICLES

Question. In response to an operational need and an aging fleet of light tactical wheeled vehicles, the Joint Services developed a requirement for a new tactical wheeled vehicle platform that would provide increased force protection, survivability, and improved capacity over the existing up-armored HMMWV (UAH) while balancing mobility and transportability requirements with costs.

Since the initiation of the JLTV program the military departments have procured over 16,000 Mine Resistant, Ambush Protected (MRAP) vehicles. Over 13,000 have been delivered to the combat theaters. Currently the MRAP Joint Program office is in the process of procuring 400 light variants of the MRAP for duty in Afghanistan, and a more mobile MRAP All Terrain Vehicle is being considered. Meanwhile, the JLTV program continues.

How have the requirements for JLTV changed based on the experiences of U.S. forces in Iraq and Afghanistan?

Army Answer. The Army and Marine Corps will continue to refine their requirements as the JLTV program progresses through its Technology Development Phase. Our experiences in Iraq and Afghanistan provide a wealth of insight into user requirements and the challenges of balancing the sometimes competing or contradictory requirements of performance (mobility and transportability), protection, and payload, with protection having the most negative effects on other requirements. Operations in both locations, as in most other places in the world, indicate a need for more of all three of these major requirements. The JLTV requirements have been heavily influenced by our experiences with improvised explosive devices while at the same time realizing that the heavy armor used in the MRAP program to mitigate that threat has severely limited the off-road utility and payload capability of those vehicles while at the same time creating significant air and shipboard transportation challenges. The combination of MRAP testing results (understanding of underbody blast phenomenon for specific hull designs) and medical analysis of occupant injury (understand injury mechanisms of all sources) is informing a more comprehensive and effective description of protection/survivability requirements to define the JLTV requirement for the next phase. The resulting JLTV requirements seek a balance in the required capabilities through modular, selective, and scalable protection.

Marine Corps Answer. The Army and Marine Corps will continue to refine their requirements as the JLTV program progresses through its Technology Development Phase. Our experiences in Iraq and Afghanistan provide a wealth of insight into user requirements and the challenges of balancing the sometimes competing or contradictory requirements of performance (mobility and transportability), protection, and payload, with protection being the most difficult to balance against the other requirements. Operations in both locations, as in most other places in the world, indicate a need for more of all three of these major requirements. The JLTV requirements have been heavily influenced by our experiences with improvised explosive devices while at the same time realizing that the heavy armor used in the MRAP program to mitigate that threat has severely limited the off-road utility and payload capability of those vehicles while at the same time creating significant air and shipboard transportation challenges. The combination of MRAP testing results (understanding of underbody blast phenomenon for specific hull designs) and medical analysis of occupant injury (understanding injury mechanisms of all sources) is informing a more comprehensive and effective description of protection/survivability requirements to define the JLTV requirements and the resulting requirements will seek a balance in the required capabilities through modular, selective, and scalable protection.

Question. On 29 October 2008, the Pentagon narrowed the field of vendors to the Lockheed Martin, General Tactical Vehicles and BAE Systems/Navistar teams to compete for the final version and contract for the JLTV. However, there have been media reports of a new requirement to develop a hybrid electric propulsion capability, a technology that none of the three chosen teams offered. Requirements creep has driven up the cost and extended the schedule for many programs. Please explain the late decision regarding hybrid electric propulsion.

Army Answer. There is no requirement to develop a hybrid electric propulsion capability. The JLTV Purchase Description (PD) is a performance based document. The PD specifies requirements for fuel efficiency, mobility, carrying capacity, etc. The vendors propose their solution to meet these requirements. The media report was incorrect.

Marine Corps Answer. There is no new requirement to develop a hybrid electric propulsion capability. The JLTV Purchase Description (PD) is a performance based document. The PD specifies requirements for fuel efficiency, mobility, carrying capacity, etc. The vendors propose their solution to meet these requirements. The media report was incorrect. The JLTV program requirements are unchanged.

Question. Two of the losing bidders, teams that were not chosen to go forward with the development effort, filed protests. What is the status of resolving the protests?

Army Answer. Northrop Grumman and Textron Marine and Land Systems filed protests with the Government Accountability Office (GAO) following the contract awards for the JLTV Technology Development effort. GAO denied both protests on February 17, 2009 and contract performance has resumed.

Marine Corps Answer. Northrop Grumman and Textron Marine and Land Systems filed protests with the Government Accountability Office (GAO) following the JLTV TD contract announcement. The Army responded in accordance with GAO guidelines. GAO denied both protests on February 17, 2009 and contract performance, which was stopped during the protests, has now resumed.

DISPOSITION OF MRAPS

Question. Throughout the services, there are some 11,000 MRAPs being used in Iraq, with some 2,000 to 3,000 in Afghanistan, and even more used for training.

I would like each service to respond:

With troop levels drawing down in Iraq in the coming year, and with the lack of MRAP compatibility to the Afghan terrain, and since they are expensive to transport and operate, what will the US military do with MRAPs in Iraq following a US withdrawal from that conflict?

Army Answer. We are exploring the long term placement of all Army MRAPs in the force structure, not just the ones in Iraq. As a first step, the Army is retrograding some of the early model MRAPs out of Iraq. The first 126 of these vehicles will be used to fill operational requirements of support units based in Kuwait. An additional 702 MRAPs will be cascaded out of theater to train units preparing to deploy. There will also be 167 MRAPs kept in Kuwait to provide additional training opportunities for these units as they enter theater. Finally, approximately 150 vehicles will be held in Kuwait as Theater Sustainment Stocks.

Question. Will MRAPs be kept in Kuwait to serve as part of prepositioned equipment sets?

Answer. Initial indications are that a number of MRAPs will be placed in Army Prepositioned Stocks (APS). HQDA G–3/5/7, Army Materiel Command, Army Training and Doctrine Command and Army Central Command are currently reviewing required quantities and variants to be placed in APS.

Question. Will the US retain all of the remaining MRAPs, or will a portion of these items be allocated for foreign military sales?

Answer. The Army is analyzing possible roles for MRAP once they are no longer needed in theater, but has not made final decisions on the disposition of all MRAPs and plans to make decisions on this matter by the start of FY10. Some of the issues that will influence future decisions are: the number of vehicles available at the end of the conflict; the condition of the vehicles, lessons learned concerning reliability mobility, and suitability of each variant. In the event that some variant(s) are deemed unsuitable for placement in the force structure, they could be made available for FMS.

TASK FORCE ODIN

Question. Please describe Task Force ODIN, including its mission and capabilities, and structural components.

Answer.———

Question. How effective has Task Force ODIN been in countering IED bomb makers and placers?

Answer. Overall IED Activity in Iraq has significantly declined since the Army made a combination of changes. We deployed Task Force ODIN, MRAP vehicles and conducted a Surge of forces in a short period of time. The specific reduction in Army casualties from IEDs and changed enemy tactics because of these changes cannot be identified.

Question. What, if any, relationship does the Army have with JIEDDO with regard to the task force?

Answer. The Army Aviation Directorate works closely with JIEDDO on many projects that support Task Force ODIN. JIEDDO funded many of the sensors and technologies that are employed by Task Force ODIN and we continue to leverage their technology enhancements as they support Army requirements.

Question. What is the relationship of Task Force ODIN to ongoing Secretary of Defense efforts to increase ISR assets available in theater?

Answer. The Army proposed many of the technological solutions for Task Force ODIN Afghanistan to the Secretary of Defense ISR Task Force for funding support. Beyond funding, the ISR Task Force also helped ensure rapid integration with combat support agencies and accelerated the OEF theater ISR architectures, improving dissemination of Task Force ODIN information.

MEDICAL EVACUATION

Question. On January 27th, 2009, in testimony before the House Armed Services Committee, Secretary of Defense Gates addressed the difference in medevac response times for Iraq and Afghanistan. He noted that the goal in Iraq is to have a wounded soldier in a hospital in an hour. However for Afghanistan the time is closer to two hours. Secretary Gates has directed increases in the number of medevac helicopters and medical professionals assigned to Afghanistan.

What are the factors that cause medevac to take significantly longer in Afghanistan than in Iraq?

Army Answer. From the Army's perspective several factors affect operations. Afghanistan's geography differs significantly from Iraq. A combination of size, mountains, and weather directly contribute to increased response times in Afghanistan. The array, or geometry, of evacuation assets across the area of operations is a second factor that varies between theaters and cause increased response time. This array is tactically determined by the challenging terrain, limited operating bases, and a finite number of operating assets. Thirdly, the lack of parity in operating assets between theaters also contributes to the increase response time in OEF. Since the two areas of operation pose different challenges and characteristics, Multi National Forces Iraq (MNF–I) and International Security Assistance Forces (ISAF) Afghanistan until recently applied different planning standards for acceptable risk—one hour in Iraq and two hours in Afghanistan. The differing standards were based on terrain, mission assessment, medical assets, and maturity of the infrastructure. Additionally, in Afghanistan, the participating NATO countries operate using their own countries rules which differ from those in the U.S. Military.

Question. What are the factors that cause medevac to take significantly longer in Afghanistan than in Iraq?

Marine Corps Answer. This response is a collaborative effort involving the Joint Staff J–4 HSSD, HQMC I&L, Offices of the Army and Air Force Surgeons General, and OPNAV N–931.

At the time of SECDEF January, 2009 testimony, there were a number of factors causing significantly longer MEDEVAC mission times in Afghanistan as compared to Iraq. Factors were geographic/weather related and also included the actual force lay down locations which supported the asset. Additionally, in Afghanistan, U.S. forces were required to operate under NATO business rules which differ from our own rules as it relates to MEDEVAC procedures. This situation has been remedied and U.S. forces are now able to launch MEDEVAC helicopters and provided the required NATO information when requested/required after the fact.

Question. What additional medevac assets, both medical facilities and aircraft have actually arrived in Afghanistan, and what additional assets are on the way?

Army Answer. Army MEDEVAC assets, both medical facilities and aircraft, form part of the joint effort to increase MEDEVAC assets in Afghanistan. One Army forward surgical team has arrived. Additional Army assets scheduled to arrive include one forward surgical team, a medical brigade command and control headquarters, four additional MEDEVAC aircraft and crews, and one 12 ship MEDEVAC company. These Army assets are part of a joint effort to increase overall MEDEVAC capability in Afghanistan. The Joint Staff has oversight of all joint additional assets supporting Afghanistan.

Marine Corps Answer. This response is a collaborative effort involving the Joint Staff J–4 HSSD, HQMC I&L, Offices of the Army and Air Force Surgeons General, and OPNAV N–931.

Naval Service forward medical facilities and CASEVAC capability along with Army and Air Force MEDEVAC assets, both medical facilities and aircraft, form part of the joint effort to increase MEDEVAC capability in Afghanistan. At this

time, one direct support Marine Corps forward surgical team and one general support Army forward surgical team has arrived. Additional forward Naval Service and Army assets are scheduled to arrive including three direct support Marine Corps forward surgical teams, one general support Navy forward surgical team, one additional general support Army forward surgical team, four additional Army MEDEVAC aircraft and crews, and one 12-ship Army MEDEVAC company. This joint effort will increase overall MEDEVAC capability in Afghanistan.

Question. Are there remaining shortages of medevac aircraft; aircrews; and Forward Surgical Teams in Afghanistan?

Army Answer. The Army has not identified any remaining shortages of MEDEVAC assets in Afghanistan for Regional Commands (RC)—East or South. Army MEDEVAC assets, both medical facilities and aircraft, form part of the joint effort to increase MEDEVAC assets in Afghanistan. One Army forward surgical team has arrived. Additional Army assets scheduled to arrive include one forward surgical team, a medical brigade command and control headquarters, four additional MEDEVAC aircraft and crews, and one 12-ship MEDEVAC company. These Army assets are part of a joint effort to increase overall MEDEVAC capability in Afghanistan. The Joint Staff has oversight of all joint additional assets supporting Afghanistan.

The additional assets will achieve parity between OIF and RC—East and South. The Joint Staff is leading efforts to improve the evacuation system in RC—North and West.

Marine Corps Answer. This response is a collaborative effort involving the Joint Staff J–4 HSSD, HQMC I&L, Offices of the Army and Air Force Surgeons General, and OPNAV N–931.

The Marine Corps and Army have not identified any remaining shortages of MEDEVAC assets in Afghanistan for Regional Commands (RC)—South or East. The additional assets described in the answer to Question 2 above will achieve parity between OIF and OEF RC—South and East. In addition, the Joint Staff is leading efforts to improve the evacuation system in RC—North and West.

Question. Today, what is the average time to evacuate a wounded soldier to a hospital in Afghanistan?

Army Answer. Army analysis shows that the average time to evacuate a wounded Soldier to a hospital in Afghanistan was 80 minutes with data from Jun 08–Dec 08. Analysis continues, but preliminary numbers show an improving trend in OEF (Oct 08–Dec 08 the average time was 71 minutes).

Marine Corps Answer. This response is a collaborative effort involving the Joint Staff HSSD, HQMC I&L, Offices of the Army and Air Force Surgeons General, and OPNAV N–931.

Army analysis shows that the average time to evacuate a wounded service member to a hospital in Afghanistan was 80 minutes with data from Jun 08–Dec 08. Analysis continues, but preliminary numbers show an improving trend in OEF (Oct 08–Dec 08 the average time was 71 minutes). As of today, USCENTCOM will reassess evacuation times after receiving the additional assets described in Question 2.

Question. The Committee understands that certain Combat Search and Rescue aircrews have been reconfigured to assist with the medevac shortfall. What are the pitfalls of this alternative?

Army Answer. From the Army's perspective, the challenge is the standardization and integration of the U.S. Air Force Combat Search and Rescue aircraft into the Army evacuation structure and standards. Differing equipment, medical protocols, training, aircraft configuration, procedural standardization, control, reporting, and resourcing integration are all potential pitfalls to this alternative.

Marine Corps Answer. This response is a collaborative effort involving the Joint Staff J–4 HSSD, HQMC I&L, Offices of the Army and Air Force Surgeons General, and OPNAV N–931.

The Marine Corps does not employ Combat Search and Rescue aircrews. Through conversations with and documentation from the Army, the challenge is the standardization and integration of the U.S. Air Force Combat Search and Rescue aircraft into the Army evacuation structure and standards. Differing equipment, medical protocols, training, aircraft configuration, and procedural standardization are all potential pitfalls to this alternative. In addition, procedural, command and control, reporting, and resourcing integration are also possible pitfalls. Air Force emphasized that HH–60G Combat Search and Rescue (CSAR) helicopters are conducting "when requested" OEF MEDEVAC missions. The main adverse impact of utilizing Air Force CSAR assets for MEDEVAC is the decreased availability of assets for other potential missions, such as humanitarian assistance and other unplanned scenarios. The Air Force has temporarily ceased advanced training at the HH–60G Weapons School (Nellis AFB, NV) to support the MEDEVAC mission. The Navy is currently

manned at 54% (75/139) with Search and Rescue Medical Technician (Navy Enlisted Code 8401) making it difficult to maintain inLieu-Of sourcing solutions for MEDEVAC.

Question. What if any are the significant limitations of our medevac helicopters that are in use in Afghanistan?

Army Answer. For Army MEDEVAC helicopters, the significant limitations are degraded performance during high altitude operations, communications, and night illumination. MEDEVAC helicopters performance starts degrading at altitudes of approximately 5000 feet and above and worsens with increasingly high altitudes. The Army has mitigated this risk by installing more powerful engines in the MEDEVAC aircraft going into theater. The 701C and 701D engines increase performance and improve high altitude operations. These engines are part of the Army mission equipment package for MEDEVAC aircraft going into Afghanistan. Line-of-sight air-ground and air-to-air communications are significantly impacted by the high terrain. To improve communications in MEDEVAC aircraft, the Army fields satellite communication radios to improve the non-line of sight, or over-the-horizon, communications capability. Finally, low night illumination severely limits night vision goggle MEDEVAC operations. Commanders developed control measures for night flying to mitigate the risk associated with this limitation. The control measures are the use of flight corridors and elevation of risk approval authority for missions not flown on designated corridors. Although the Army has fielded a forward looking infrared system (FLIR) to MEDEVAC helicopters, this system is used to identify personnel at the landing zone.

Marine Corps Answer. This response is a collaborative effort involving the Joint Staff J–4 HSSD, HQMC I&L, Offices of the Army and Air Force Surgeons General, and OPNAV N–931.

The Army has determined that its MEDEVAC helicopters significant limitations are related to: degraded performance during high altitude operations, communications, and night illumination. MEDEVAC helicopters performance starts degrading at altitudes of approximately 5000 feet and above and worsens with increasingly high altitudes. The Army has mitigated this risk by installing more powerful engines in the MEDEVAC aircraft going into theater. The 701C and 701D engines increase performance and improve high altitude operations. These engines are part of the Army mission equipment package for MEDEVAC aircraft going into Afghanistan. Line-of-sight air-ground and air-to-air communications are significantly impacted by the high terrain. To improve communications in MEDEVAC aircraft, the Army fields satellite communication radios to improve the non-line of sight, or over-the-horizon, communications capability. Finally, low night illumination severely limits night vision goggle MEDEVAC operations. Commanders developed control measures for night flying to mitigate the risk associate with this limitation. The control measures are the use of flight corridors and elevation of risk approval authority for missions not flown on designated corridors. The Army has fielded a forward looking infrared system (FLIR) to MEDEVAC helicopters in order to enable location of personnel at pick up sites.

Question. How have Air Force Combat Search and Rescue helicopters and crews contributed to solving the medevac shortfall in Afghanistan?

Army Answer. From the Army's perspective the Air Force Combat Search and Rescue (CSAR) helicopters have provided an acceptable "in lieu of solution to the Combatant Commander's need for MEDEVAC helicopters. The U.S. Air Force has six dual mission (MEDEVAC and Combat Search and Rescue) CSAR aircraft operating in Afghanistan. An additional six CSAR aircraft have been deployed as a bridging solution until the Army's Combat Aviation Brigade arrives with its organic twelve UH–60 aircraft MEDEVAC Company. However, the additional six CSAR aircraft will redeploy out of Afghanistan in late summer 2009. The USAF is best able to provide the specific contributions of its CSAR helicopters during MEDEVAC operations in Afghanistan.

Marine Corps Answer. This response is a collaborative effort involving the Joint Staff J–4 HSSD, HQMC I&L, Offices of the Army and Air Force Surgeons General, and OPNAV N–931.

Dating back to 2006, the Air Force Combat Search and Rescue helicopters and crews have been contributing to the MEDEVAC missions in Afghanistan. In a contributable effort to solving the MEDEVAC shortfall in Afghanistan, all Air Force HH–60G helicopters in Afghanistan are tasked to perform the MEDEVAC. This includes the six additional helicopters received in early 2009. U.S. Army MEDEVAC capability arrives in Afghanistan in mid-2009 at which time U.S. Air Force MEDEVAC employment will be reassessed.

IDENTIFICATION FRIEND OR FOE (IFF)

Question. The range and lethality of modern weapon systems can result in accidental or friendly fire or fratricide situations. The Army long sought technology to assist with the battlefield identification of friendly forces on the ground and in the air. During the first Gulf War, during the hours of darkness, an Army Apache helicopter fired an anti-tank missile on a U.S. armored personnel carrier mistakenly identifying the M113 as Iraqi. In April of 2004 former professional football player Pat Tillman was mistakenly engaged and killed by small arms fire from his fellow Army Rangers. In both cases the only means of identification was visual.

What technology is currently available to U.S. forces to positively identify friend from foe?

Army Answer. Since the first Gulf War we have made significant investments in improved sensors, optics, battle command systems, and markings that have enhanced overall combat effectiveness while significantly improving our capability to identify friend from foe. Technologies available during the first Gulf War consisted of Optical Sights, Thermal Integrated Sight Unit, a limited number of Global Positioning Systems (GPS), and various rudimentary markings, such as the Korean War vintage VS 17 Cloth Panel and inverted "V" markings. Today, most of our Stryker Vehicles, Abrams Tanks, Bradley Fighting Vehicles, and Apache helicopters are equipped with Second Generation Forward Looking Infrared (FLIR) sights and Soldiers are being equipped with improved thermal sights and night vision goggles (NVG). These devices have greatly extended the range at which battlefield entities can be identified, particularly during hours of darkness and during limited visibility. In battle command, we have fielded thousands of Force XXI Battle Command Brigade and Below/Blue Force Tracking Systems. These systems, combined with the proliferation of GPS, have given commanders much better battlefield situational awareness, enabling them to avoid situations, such as incidental contact between friendly units, that could lead to fratricide. The Land Warrior and future Ground Soldier Ensemble capabilities provide unparalleled dismounted combatant location fidelity and situational awareness, greatly reducing the chance of fratricide with small units. The fielding of Unmanned Aerial Systems (UAS) with a variety of sensor packages and the Long-Range Advance Scout Surveillance System has also added greatly to overall improvement in battlefield situational awareness and target identification. Regarding markings, we have fielded thousands of the Joint Combat Identification Marking System (JCIMS) kits that provide a relatively inexpensive, and low technology capability to assist in identifying friend from foe. JCIMS kits include metal and cloth panels covered with a special film that produces a unique thermal signature visible by FLIR and thermal sights and a small infrared beacon that emits a unique strobe that can be seen by ground platforms, helicopters, and dismounted combatants using NVG. Collectively, these investments, combined with improved training, doctrine, tactics, techniques and procedures, and rules of engagement have essentially mitigated the types of fratricide incidents experienced during the first Gulf War.

Marine Corps Answer. The ability to positively identify friend from foe requires a complex interaction of training, doctrine, tactics techniques and procedures (TTP) and rules of engagement (ROE), and information derived from command and control/blue force tracking (C2/BFT) and cooperative target identification (CTI) systems. Within the current available technologies there is not a capability that would allow for the positive identification of friend from foe at the shooter level. However there has been a great deal of Joint and Coalition effort completed that will, at the platform level, provide the capability to identify a like equipped platform as a friend and a non-equipped platform as an unknown. C2/BFT systems support the reporting and display of friendly position location information (PLI) on digitized map displays that provide a commander-focused general knowledge of friendly forces on the battlefield to facilitate C2 and mission execution requirements. At the individual platform/shooter level, CTI systems are required to provide real-time information to facilitate force sorting and enable a "shooter-focused" shoot/don't shoot decision for detected entities in a weapon sight.

• Ground-Ground Operations. In ground-ground operations, we've made significant investment in the Force XXI Battle Command Brigade and Below (FBCB2), Data Automated Communications Terminal (DACT), and Mini Transmitter (MTX) C2/BFT technologies to improve a commander's situational awareness (SA) of friendly force locations on the battlefield. We've also invested in improved optics and visual marking systems to better enable the visual identification at the shooter level of detected ground platforms and individual combatants. While the investment in C2/BFT, optics, and JCIMS partially address the Combat Identification (CID) technology gap in the ground-ground environment, they do not negate the need for a

positive CTI capability. At the shooter level in direct-fire ground engagements, SA (blue icons on a digitized map) is not sufficient—there will always be a data correlation problem between the gun sight and the SA tool—regardless of the accuracy of the friendly force SA data. OEF/OIF friendly fire data validate the continued need for a CTI (interrogation and reply) capability to support "force sorting" and fratricide mitigation for detected entities in the gunner's sight.

• Joint Fires Operations. In the Joint Fires arena, we've fielded the Target Location Designation Handoff System (TLDHS), Remotely Operated Video Enhanced Receiver (ROVER) technologies to support Digitally-aided Close Air Support (DaCAS), and the LITENING advanced targeting pod to better enable the visual acquisition and identification of ground targets at the terminal control node. These technologies, combined with significant improvements in standardized Joint Tactical Air Controller (JTAC) training, and the development of Joint TTP for DaCAS have significantly mitigated the likelihood of repeating early OEF and OIF air-ground fratricide events—but do not by themselves negate the need for an air-ground CTI technology.

• Surface-Air and Air-Air Operations. In surface-air and air-air arena, the Mark XII Mode 4 IFF system continues to be the primary system for the identification of U.S. and Coalition friendly aircraft.

Question. What advancements in technology are in development by the Army and Marine Corps?

Army Answer. Over the next two years we plan to invest resources in Science and Technology to mature battlefield identification technologies that will enable us to address remaining capability gaps in the areas of dismounted combatants, air-to-ground, and light vehicles. Promising technology options in development for these applications include the following: Radio-Based Combat Identification/Situational Awareness for dismounted combatants, air-to-ground, and light tactical vehicles; Millimeter Wave Question and Answer technology for air-to-ground and light tactical vehicles; Laser/Radio Frequency for light tactical vehicles, Reverse Mark X11A Mode 5 Identification Friend or Foe and Radio Frequency Tags for air-to-ground and dismounted combatants; Optical Combat Identification System for dismounted combatants; Combat Identification Server for dismounted combatants and air-to-ground; and Joint Battle Command-Platform for improved and increased battlefield situational awareness. These efforts are underway to reduce the cost of Millimeter Wave Question and Answer technology for use on heavy turreted platforms, such as the Stryker, Abrams tank, and Bradley Fighting Vehicle. We are working with the Marine Corps in all of these endeavors.

Marine Corps Answer. The Marine Corps is continuing its pursuit of Cooperative Target Identification technologies providing our shooters with a capability to positively identify and sort friends from potential enemies at the point they are detected on the battlefield. The following technologies were assessed at the Coalition Combat Identification Advanced Concept Technology Demonstration (CCID ACTD) Urgent Quest and were identified as technologies warranting further investment:

Battlefield Target Identification Device (BTID). A STANAG 4579 compliant, coalition interoperable, millimeter wave-based ground-ground CTI technology providing a shooter-focused interrogation-reply capability supporting the identification of friendly vehicles in a gunner's sight in less than 1 second. BTID also provides an inherent Digital Data Link (DDL) and Data Exchange Mode (DEM) to mitigate SA latency of equipped coalition vehicles in the immediate vicinity of the host platform. Current applications of C2/BFT technologies do not allow for the update rate that is provided by BTID resulting in latent data unsuitable for split second decision-making. BTID will mitigate this problem. BTID is the only interrogation and reply technology with proven military utility and effectiveness in the ground-ground operational domain. While not formally assessed, air-ground BTID technologies have been demonstrated at past ACTD events and are scheduled for formal assessment at the CCID ACTD Bold Quest Demonstration scheduled for October 2009. Additionally, private industry has demonstrated a capability to track dismounted combatants through portable, miniaturized BTID transponders. Based on a successful military utility assessment at the 2005 CCID ACTD Urgent Quest demonstration, the Marine Corps has resourced an Army-led joint BTID acquisition approach endorsed by the Army Marine Corps Board, Joint Requirements Oversight Council, and Service Secretaries for the ground-ground BTID technology. Recent reprogramming of FY10 and FY11 BTID funding by the Army have caused an OSD-directed internal Army review of its strategy to bring itself back into compliance with the joint BTID acquisition strategy. Along with the U.S., the United Kingdom, Italy, Spain, Sweden, France, and Canada have obtained or procured BTID devices for testing and demonstration purposes, but are awaiting a decision by the United States as to whether or not to continue to pursue the technology from a coalition/NATO perspec-

tive. The Marine Corps continues to support and fund a Joint effort with the Army identified as Component Lead.

Radio Based Combat Identification (RBCI). A software waveform upgrade to the SINCGARS radio providing an interrogation/reply capability for an operator selectable geographic point. RBCI provides an "area clearance" capability for indirect fires (i.e. artillery, mortars, naval gunfire, etc) and CAS—it is not designed to provide a point-to-point interrogation/reply CTI capability for ground direct-fire weapons. Based on the results of the 2005 CCID ACTD Urgent Quest demonstration, the AMCB directed the Services fund the integration of RBCI transponder (reply) software on all U.S. SINCGARS radios (Army and Marine Corps) and subsequently the Marine Corps integrate an RBCI interrogation capability into its Target Location Designation Handoff System (TLDHS) for indirect fires and CAS area clearance.

Joint and Coalition Technology Development (Air-Ground). In air-ground operations, the CCID ACTD Bold Quest 09 demonstration scheduled for October 2009 will assess and/or demonstrate air-ground technologies with significant joint and coalition interest. Bold Quest 09 will include five aircraft air-ground CTI technologies (Pod-mounted BTID, Pod Mounted RBCI, Reverse IFF (Mode 5), Reverse IFF (Mode S), and the CID server—a net-centric tactical service oriented architecture using existing equipment and infrastructure to provide requesting aircraft with 5 closest ground friends in the vicinity of an identified target or geographical point of interest. Bold Quest 09 assessment results will be used by the Joint community to support a follow-on Analysis of Alternatives (AoA) to inform the way-ahead for a joint/coalition air-ground CTI capability. Joint and Coalition Technology Development (Surface-Air and Air-Air). In surface-air and air-air operations, U.S and Coalition forces are currently developing a MARK XII Mode 5 IFF capability as a replacement for the existing MARK XII Mode 4 capability which is currently providing a friendly identification capability in the surface-air and air-air operational environments. Within the U.S. Joint Services, a Joint Mode 5 fielding schedule has been coordinated through the JFOCM-chaired Combat Identification-Blue Force tracking Executive Steering Committee and endorsed by the JROC to establish an Initial Operating Capability in 2014 and Full Operational Capability in 2020 for the Joint Services.

Question. Is there a technology solution that can be easily shared with allied military and police forces?

Answer. We continuously share information on our identification friend or foe technology efforts with the Five Power Senior National Representatives—Army countries and with our NATO Allies through active participation in the Working Groups and as a party to NATO Standardization Agreements. We also work closely with various allies in Advanced Concept Technology Demonstration (ACTD) projects. The Coalition Combat Identification ACTD is an example of successful cooperation and sharing of technology with our allies. This U.S.-led ACTD included the United Kingdom, France, Germany, Italy, Canada, Sweden, Denmark, and Australia, and its goal was to evaluate the military utility of various identification friend or foe technologies to minimize fratricide incidents and provide increased combat effectiveness in Joint, Allied and Coalition operations. The capstone event for this ACTD was a force-on-force operational demonstration conducted in fall of 2005 at the United Kingdom's Salisbury Plains Army Training Facility. On a case-by-case basis friend or foe solutions developed for U.S. forces may be shared with allied military forces through the Foreign Military Sales (FMS) process. This is particularly true with allies who participate as coalition members with the U.S. in combat operations in order to achieve interoperability. Recent examples include the transfer or lease via FMS of numerous night vision devices, Force XXI Battle Command Brigade and Below/Blue Force Tracking, Joint Combat Identification Marking Systems, Ground Laser Target Designators, Unmanned Aerial Systems (RAVEN), and Forward Looking Infrared technology. Recipient countries include Canada, Australia, Spain, Croatia, Albania, Bosnia, the United Kingdom, Denmark, Estonia, Germany, Hungary, Latvia, Lithuania, Netherlands, Romania, and Slovakia. In addition, Section 1202 of the National Defense Authorization Act allows Combatant Commanders to provide command and control technologies on a loan basis provided directed provisos for such loans are met. Upon completion of coalition combat operations these articles are returned to the Combatant Command. Technology sharing with police forces is much more difficult due to proprietary, export control, and security classification restrictions.

Marine Corps Answer. The following technologies can be shared with allied military and/or police forces—Joint Combat Identification Marking Systems (STANAG 2129 compliant).

Question. Is any such technology now in use by the security forces of Iraq and Afghanistan?

Army Answer. U.S. friend or foe technologies are not currently in use by Iraqi and Afghan security forces. Some export variant night vision equipment and basic Forward Looking Infrared (FLIR) technologies have been or will be transferred to Iraqi and Afghan security forces. The main purpose of these transfers is to build night fighting capability for these forces. Identification of battlefield entities as friend or foe during hours of darkness is a secondary benefit to these transfers. U.S. forces are well trained in fratricide avoidance involving Iraqi and Afghan security forces.

Marine Corps Answer. The following technologies are now in use—Joint Combat Identification Marking Systems (STANAG 2129 compliant).

BIOMETRICS

Question. Biometrics is the science and technology of measuring and analyzing biological data. It can be used to identify humans by their fingerprints, hand prints, DNA, facial shape or eye scan.

How is biometric technology employed to assist with force protection in Iraq and Afghanistan?

Army Answer. With respect to force protection, Army forces fundamentally use biometrics capabilities to account for and facilitate population management within an area of operations.

At detainee facilities, host nation police academies, forward operating bases, and within battlespaces, Soldiers collect biometrics data on individuals within those areas using both fixed-site base access systems and handheld devices. Soldiers then transmit those collections to the DoD biometrics database for potential matching and subsequent intelligence exploitation. Once vetted, Army forces use that biometrics data to verify an individual's identity with certitude. If a biometrics identity is not flagged within their devices following the vetting process, Soldiers can confidently and safely grant access and privileges (e.g. training, hiring). If the biometrics identity is flagged within their devices, Soldiers take the appropriate action against the flagged individual (e.g. detain, deny access, deny training) upon encounter.

Marine Corps Answer. Biometric tools are used in combat patrols, detainee screening, vehicle checkpoints, entry control points, and for the screening and badging of Iraqi and Afghan Security Forces. Aggressive employment of biometric systems has restricted the enemy's freedom of movement appreciably, aiding in the disruption of enemy operations.

Question. Does the Army employ biometric identification in other places?

Answer. Yes, Army Special Operations Command (ARSOC), under the operational control of the joint regional Special Operations Commands (SOCs), actively employs biometrics worldwide in conjunction with host nation military forces. In addition, Army conventional forces have employed biometrics in a force protection capacity during operations in Bosnia.

Marine Corps Answer. The Marine Corps is running a pilot project at MCB Camp Pendleton to determine the utility of biometric technology for base access. PP&O (PS) is leading this effort.

Question. Looking to the future, what are the additional applications to use biometrics to contribute to force protection?

Army Answer. Critical to the DoD and Army's biometrics advancement is the development of "stand-off" technology that will allow Army forces to verify identities from afar. This technology and approach is more proactive in nature and will allow Soldiers to identify enemy prior to their advances at check points or gates.

In the future, biometrics employment will also extend to the protection of Army forces at CONUS and OCONUS home stations. A biometrically-enabled approach to physical and logical access to installations, facilities, and networks would provide greater protection than the badge-based approach that is currently employed. In conjunction with local and federal law enforcement partners, even those non-DoD individuals with access to home stations (e.g. deliverers, contractors) would be biometrically vetted prior to entry.

Marine Corps Answer. As DoD biometric technology and employment matures, and as global collection of biometric signatures expands, DoD will realize an unprecedented capability to positively identity, track, and locate persons of intelligence and security interest.

Question. Does the Army and Marine Corps currently employ any long range biometric devices? (For example at automobile check points?)

Army Answer. No, Army forces do not currently employ any long-range biometrics devices. Of course, Army forces possess various long-range surveillance systems but none are currently equipped with facial recognition or iris technology. However, on

a limited scale, the DoD Biometrics database does have the capability to match facial images extracted from video and still photography.

With respect to automobile check points, the Government of the Islamic Republic of Afghanistan (GIRoA) is currently working with the Combined Security Transition Command—Afghanistan (CSTC–A) to field a long-range camera system within Kabul that will have an Automatic Number Plate Capability, but the system has no biometrics capability.

At the forefront of DoD and Army Research and Development efforts is the development of "stand-off" biometrics systems that will allow for increased collection, screening, and targeting using facial recognition and iris technology.

Marine Corps Answer. No, the Marine Corps is closely watching this technology evolve, however. In particular, iris-on-the-move and at-a-distance could enable faster throughput at checkpoints.

COUNTERING SNIPER

Question. One sniper can seriously disrupt a unit's operation and mission accomplishment. Countering the efforts of enemy snipers is accomplished both through material solutions and through better tactics and training.

What are the technology-based solutions currently in use to detect and counter snipers?

Army Answer. The materiel solutions currently being fielded as part of the Army's ongoing Counter Sniper equipping effort are:

- Boomerang III Acoustic Gunshot Detection System
- SWATS (Soldier Wearable Acoustic Targeting Systems)
- Vanguard (Remote Weapon Station integrated with a Gunshot Detection System)
- Handheld Thermal Imagers (Mini Thermal Monocular)
- Stabilized and Ruggedized Binoculars
- 3x Magnifier for the Close Combat Optic
- Security Veils (for Guard Towers)
- Perimeter Security Veils
- Turret Nets
- Fast Obscurant Grenades

Marine Corps Answer. The Marine Corps has and is investigating several technologies to combat snipers. Currently, there are over 100 Boomerang acoustic counter sniper systems being used by Marines in theater. This is not a USMC program of record, but one that the Army's Rapid Equipping Force (REF) has allowed us to use. In addition, we have investigated a variety of Optical Augmentation devices, and the Ground Wearable Acoustic Counter Sniper (GWACS) system.

Question. Who in the Army and Marine Corps has the responsibility for organizing, manning, and equipping the forces in the field for the counter-sniper fight?

Army Answer. The Secretary of the Army is responsible for the Title 10 functions of Organizing, Supplying, Equipping, and Training Army Forces. As a general rule, the VCSA approves and the DCS, G–3/5/7 implements organizational design changes proposed by the Commander, Training and Doctrine Command (TRADOC) for all Army Operating Forces including incorporating a counter-sniper capability based upon current and emerging doctrine and an approved requirements determination. To accomplish this, TRADOC has established the Sniper Defeat Integrated Capabilities Development Team at the Maneuver Center of Excellence (MCOE) which consists of representatives from across TRADOC to include the Combined Arms Center (CAC), Combined Arms Support Command (CASCOM), the Maneuver Support Center (MANSCEN), and the Intelligence Center. This team also coordinates with the ASA(ALT) and Army Materiel Command for materiel solutions to counter-sniper operations.

Marine Corrps Answer. Currently there is not a dedicated Program Manager for counter-sniper operations within the Marine Corps Systems Command, nor has a formal requirement been defined. Within the Marine Corps Warfighting Lab and Combat Development Directorate, there are counter-sniper programs that work closely with each other, and both also stay in contact with the relevant Program Managers in the Marine Corps Systems Command, such as PM MERS, ICE, Small Arms, and Optics.

Question. Currently, what are the sniper detection devices fielded to deployed units for individuals, vehicles and fixed bases?

Army Answer. The materiel solutions currently in use that are designed to detect the location of snipers are:

Boomerang III Acoustic Gunshot Detection System—a vehicle mounted system that pinpoints incoming small arms fire from an enemy shooter based on the acous-

tic signature made by the passing bullet and the muzzle blast from the rifle which fired it. Since October 2008, the Army has fielded over 700 Boomerang IIIs to units in Iraq and Afghanistan and plans to field over 2000 more this year. Boomerangs are being installed on Mine Resistant Ambush Protected (MRAP) vehicles and M1151 Up-Armored HMMWVs.

Soldier Wearable Acoustic Targeting System (SWATS): a lightweight, Soldier portable system which locates hostile rifle fire in the same manner described above. Since November 2008, the Army has fielded over 1000 SWATS to units that have requested the system through the Army's Rapid Equipping Force (REF) or via an Operational Needs Statement (ONS).

Fixed location gunshot detection was not part of the Counter Sniper equipping effort. The few fixed site gunshot detection systems that have been employed and assessed in theater did not meet the criteria for inclusion on the Counter Sniper equipment list.

Marine Corps Answer. Through the Marine Corps Warfighting Lab, the Marine Corps has and is investigating several technologies to combat snipers. Currently, there are over 100 Boomerang acoustic counter sniper systems being used by Marines in theater. This is not a USMC program of record, but one that the Army's Rapid Equipping Force (REF) has allowed us to use. In addition, we have investigated a variety of Optical Augmentation devices, and the Ground Wearable Acoustic Counter Sniper (GWACS) system. Early Attack Reaction System (EARS), a more technologically mature system manufactured by QinetiQ, has been employed by the Army as Soldier Wearable Acoustic Targeting System (SWAT). The Marine Corps Combat Development Command, Combat Development Directorate is currently investigating if the requirement the Army has generated for that program could be used by the Marine Corps as well. We also continue to actively investigate potential new systems through industry, academia, and other agencies within the government and Department Of Defense in our efforts to find the most cutting edge technology to protect our Marines from the sniper threat.

Question. Please describe the current threat to U.S. forces in Afghanistan and Iraq due to snipers.

Answer. ———.

Question. Is sniper detection equipment available for training at home station?

Army Answer. Optical-based sniper detection equipment, such as hand-held thermal imagery devices and stabilized and ruggedized binoculars, are part of unit equipment when authorized by their modified table of organization and equipment, and as such, are available for use during a unit's home station tactics training. However, the more advanced acoustics-based sniper detection equipment systems currently being used in Iraq and Afghanistan are not yet available in sufficient quantities to support training at home station.

To date, all initial commercial-off-the-shelf purchases of acoustics-based vehicle-mounted and individually-worn sniper detection equipment systems were fielded directly to tactical units in Iraq and Afghanistan. Initial training on the systems fielded to date is accomplished through new equipment training teams. For all subsequent training, it is conducted by outbound units training inbound units prior to their transition of authority for the mission.

Marine Corps Answer. Yes, boomerang acoustic counter sniper systems currently being utilized and tested by Marines are available for training. In addition to technology the Marine Corps has implemented a program that identifies and teaches skills to make Marines more efficient "hunters" in all environments, especially urban. The goal is to improve operational effectiveness, while reducing casualties. Marine Corps Combat Development Command directs the development of the Combat Hunter Program to "be the hunter, not the hunted". The Marine Corps War fighting Lab brought in Subject Matter experts such as hunters and police officers to teach Marines to become more efficient "Hunters". Civilian experts with big game hunting, tracking, and profiling experience supported the experiments.

The mission of Combat Hunter, which is now a training program available for deploying units, is the creation of a mindset through integration of enhanced observation, combat profiling, and combat tracking in order to produce a more ethically minded, tactically cunning, and lethal Marine better prepared to succeed across the range of military operations.

Marine snipers are used as counter-snipers and as such are well suited for detecting and engaging enemy snipers. One of the 0317 Marine Sniper Military Occupational Specialty (MOS) tasks in the Training and Readiness (T&R) manual is to conduct counter sniper operations. This is taught as a learning objective in the USMC Weapons Training Battalion Scout Sniper Team Leader Course, and it is an advanced 2000 level skill.

Question. Please explain how the Army coordinates the efforts of urgent war time fielding efforts and regular order procurement programs.

Army Answer. The Army has two processes which act as linkages between the equipping efforts required for current operations and the institutionalized acquisition programs which are focused on modernization and transformation.

The Senior Budget Requirements and Program Board (BRP) is focused on coordinating Army staff elements in identifying and resourcing equipping solutions to meet the validated requirements of currently deployed and future deploying units to Iraq and Afghanistan. The resourcing decisions made by the BRP involve numerous ongoing acquisition programs and items that are in sustainment. The Army's acquisition community and the Army Materiel Command (AMC) work very closely with the BRP to ensure all war time equipping requirements are met.

The Capabilities Development for Rapid Transition (CDRT) process identifies nonstandard systems (commercial-off-the-shelf and non-developmental items) which were inserted for limited use in current operations that should become standard Army equipment and transition into institutionalized acquisition programs via the Joint Capabilities Integration Development System (JCIDS). The CDRT monitors the nonstandard equipment which is inserted into Iraq and Afghanistan in order to bridge capability gaps identified by the requesting unit(s). Based on the feedback of the unit and other operational assessments, the CDRT council makes recommendations to senior Army leadership on whether the technology should remain in theater as a sustainment item, terminate, or transition into a formal acquisition program.

For example, there are two potential acquisition programs that involve Sniper Detection technology which came about as a result of the CDRT process. The Gunshot Detection System and the Individual Gunshot Detector programs now have JCIDS compliant requirements documents and will compete for funding in the FY12–17 Program Objective Memorandum (POM). These programs were the result of the CDRT council carefully evaluating the feasibility of earlier versions of acoustic gunshot detection systems and recommending to Army decision makers that it become an enduring capability.

Marine Corps Answer. In addition to close coordination with Army for counter-sniper solutions. We also continue to actively investigate potential new systems through industry, academia, and other agencies within the government and Department Of Defense in our efforts to find the most cutting edge technology to protect our Marines from the sniper threat. Both the Marine Corps Warfighting Lab and the Marine Corps Systems Command work closely with the Army as well as other DoD organizations to investigate, test and procure technologies to help combat the enemy sniper threat.

Question. Is there a plan to issue sniper detection equipment to all Army and Marine Corps units including National Guard and Reserve units?

Army Answer. Yes. The equipment which is being fielded to units in Iraq and Afghanistan as part of the ongoing Counter Sniper equipping effort is fielded in accordance with the priority established by the local command. Thus, the units which receive the equipment may be an Active, National Guard, or Reserve unit if the local command determines that unit meets the criteria for receiving Counter Sniper equipment. Furthermore, Counter Sniper equipment is accounted for as Theater Provided Equipment (TPE) and will therefore transfer from losing unit to gaining unit during Relief in Place/Transfer of Authority (regardless of what component the units are). The Marines have counter-sniper equipment in the. field for assessment but have not yet begun to issue these items across their deployed force.

Marine Corps Answer. Currently, there are over 100 Boomerang acoustic counter sniper systems being used by Marines in theater. We are also investigating a man wearable acoustic counter sniper system called the GWACS. A more technologically mature system manufactured by QinetiQ called EARS has been adopted by the Army as a program of record. The Marine Corps Combat Development Command, Combat Development Directorate is currently investigating if the requirement the Army has generated for that program could be used by the Marine Corps as well.

LOST WEAPONS

Question. In recent testimony before the Subcommittee on National Security and Foreign Affairs, of the Committee on Oversight and Government Reform of the House of Representatives, a witness from the Government Accountability Office (GAO) reported on the weaknesses in the system to maintain accountability for weapons provided to the Afghan National Security Forces, (the Afghan National Army and Afghan National Police). From 2002 to 2008 the United States Government, with the U.S. Army and Navy as action agents, purchased and transferred

to the Afghan Security Forces over 242,000 light weapons and small arms, at a cost of about $120 million. Other countries have provided another 130,000 weapons for the Afghan National Security Forces. However, lapses in accountability occurred throughout the supply chain. The GAO found that the Army and Combined Security Transition Command—Afghanistan did not maintain complete records for an estimated 87,000 of the 242,000 weapons, and that it is impossible to determine their disposition or location.

General, can you explain for the Committee the loss of accountability for 87,000 weapons that were provided to the Afghan security forces?

Army Answer. There are two accountability issues regarding the 87,000 weapons reported in the Jan 2009 GAO audit (GAO–09–267). The first is serial number accountability and the second is physical accountability of the weapons in Afghanistan. The Army can only address the serial number accountability as the physical accountability of weapons is not under the control of the Army Acquisition Community and should be addressed by Central Command and the Combined Security Transition Command—Afghanistan (CSTC–A).

In the case of some 46,000 weapons acquisitions for Afghanistan, the requirement for serial number accountability and tracking was not included in Army contract provisions let by the U.S. Army Security Assistance Command (USASAC). Due to this oversight, serial numbers were not provided by the commercial brokers with shipments of these weapons, and not entered to the DoD Small Arms Serialization Program (DODSASP) registry. USASAC has since gone back to the contractors and received all the missing serial numbers for the Afghanistan contracts. All future contracts will contain, as a condition of the contract, a requirement for the vendor to provide serial numbers at time of shipment. USASAC is providing CSTC–A with all serial numbers and is working to ensure the entry of all serial numbers into the DODSASP registry as required by regulations.

Question. Is it likely that some of these weapons may now be in use by the Taliban and others who regularly strike at our Soldiers and Marines and our allies?

Answer. The Army does not have that data.

Question. How have U.S. forces improved accountability for weapons transferred to Afghan Security Forces?

Answer. The Army does not have oversight accountability of weapons provided to the Afghan Security Forces. As we understand, Combined Security Transition Command—Afghanistan (CSTC–A) is currently recording and tracking the serial numbers of all U.S. procured weapons. For any additional information, Commander, U.S. Central Command can provide the most current data.

SENSORS

Question. The Army is proceeding with plans to take technology that is ready now in the Future Combat Systems program, and "spin it out", that is, field it ahead of the rest of FCS to Infantry Brigade Combat Teams. One of the items to be spun out is "Unattended Sensors", both tactical and urban.

What is the difference between a tactical sensor and an urban sensor?

Answer. The Tactical-Unattended Ground Sensors (T–UGS) can be used to perform various mission tasks including perimeter defense, surveillance, target acquisition, situational awareness and Chemical, Biological, Radiological, Nuclear early warning. The gateway nodes organize and maintain the cluster; collect, process, and correlate sensor data; and automatically report preprocessed contact and hazard data to the Common Operating Picture (COP) via Joint Tactical Radio Systems (JTRS) links to the network. The T–UGS clusters will be distributed initially through soldier emplacement and ultimately via unmanned ground and air platforms.

The Urban-Unattended Ground Sensors (U–UGS) is a network-enabled reporting system that brings force protection into an urban setting and residual protection for cleared areas or for other Military Operations in Urban Terrain (MOUT). U–UGS will be hand employed by Soldiers or by robotic vehicles to monitor and provide early warning and situational awareness. U–UGS provide remote monitoring and warning capability to the Brigade Combat Team (BCT) and small unit (platoon) in a MOUT environment for securing areas such as tunnels, caves, sewers, structures, and buildings. The U–UGS system will be used by the BCT to support dismounted operations in urban environments via intrusion alerts for closed areas that have been cleared of enemy soldiers, by monitoring urban congestion points such as corridors and stairwells; and guarding other avenues of approach such as sewers, culverts, and tunnels. Consisting of small, lightweight, and inexpensive sensors and associated processing and networked communications assets, the U–UGS system will support BCT operations by providing efficient, economical, and persistent coverage

of areas of special interest to the BCT commanders. Inexpensive local networked communications will be interoperable with the JTRS network at the U–UGS gateway node to provide the urban situational awareness.

Question. How are the new FCS sensors different from the unattended sensors used during the Vietnam War?

Answer. There are significant differences between FCS sensors and those used during the Vietnam War. The drivers for these differences revolve around the advances in technology development, computer processing, and Battle Command software being used in the development of the FCS network. Rather than a standalone sensor, the FCS sensors are networked and provide the Soldiers with enhanced situational awareness.

UGS systems were developed to monitor the movement of enemy personnel. The original sensors were actually air-dropped radio sonobouys that were adapted by the U.S. Navy for ground use by replacing existing hydrophones with microphones and geophones (seismic sensors). These seismic/acoustic sensors were the only type to receive widespread deployment during the Vietnam War; these were produced in hand implanted and air-dropped versions, both containing common modules. Without modern electronics these sensors were easily susceptible to background noise. While able to detect footsteps and vehicles at ranges in excess of 30 meters, false alarms were often generated by events such as aircrafts overhead, wind, thunder and rain. To combat these problems the several sensors were planted in strings (lines), real targets would be expected to set off the sensors in sequence, while background interference would set off all the sensors simultaneously.[1]

The FCS sensors include: Ground Sensor Suite, Air Sensor Suite and UGS. Combinations of these sensors provide the FCS (BCT) with the ability to "see first" and provide the warfighter with actionable information.

The FCS UGS will provide a variety of remote sensing capabilities intended to enhance the commanders' tactical situational awareness and intelligence picture. As an integral component of the FCS layered sensor network, the remotely deployable UGS will provide enhanced threat warning, situational awareness and force protection in both tactical and urban environments for extended periods. FCS UGS provides Intelligence, Surveillance and Reconnaissance/Chemical, Biological, Radiological, and Nuclear (ISR/CBRN) awareness to the BCT of areas not covered by manned/unmanned ground/air vehicles. It also detects and locates intruders, monitors cleared rooms during structure clearing operations (protecting the rear), and monitors cleared structures for re-entry.

Question. Are these sensors in use in Iraq or Afghanistan?

Answer. Currently FCS UGS are not used in Iraq or Afghanistan. While there are other UGS systems currently employed in Operation Iraqi Freedom/Operation Enduring Freedom, FCS UGS are designed to meet the FCS Net-Centric Key Performance Parameter as part of the overall FCS System of Systems solution. Critical command and control, fusion, and other FCS Battle Command functionality built on the FCS-unique System of Systems Common Operating Environment are an integral part of the FCS UGS systems. The Army Deputy Chief of Staff, Intelligence has determined that FCS UGS are the Army's UGS Program of Record, and that all UGS-related requirements should be provided to and synchronized within the FCS program.

Training and Doctrine Command Capability Manager FCS in conjunction with Program Manager FCS have been actively involved in applying lessons learned from Operation Iraqi Freedom/Operation Enduring Freedom UGS. Consequently, the FCS T–UGS program has adopted a new form factor (NFF) design that is a smaller hand emplaced variant of the original T–UGS design. These NFF T–UGS will also incorporate increased battery life technology and radio range extension nodes. This smaller design is a result of lessons learned in theater.

Question. How will these new sensors contribute to force protection in the field or in base camp?

Answer. U–UGS provides the BCT enhanced situational awareness and force protection in urban environments. The U–UGS provides remote monitoring and warning capability for the current force small unit (section) in caves and in urban environments such as tunnels, sewers, structures, and inside of buildings. The U–UGS will be used by the BCT to support dismounted operations in urban environments. The U–UGS network will support current force operations by providing efficient, economical, and persistent coverage in urban areas and caves.

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[1] Source: Investigation of an Unattended Wireless Ground Sensor System; George F. Hahn Department of Electrical and Computer Engineering, University of Auckland, Auckland, New Zealand.

Utilization of both the T–UGS and U–UGS systems greatly enhances the Soldiers force protection by denying enemy forces freedom of maneuver and early detection capabilities.

Question. When will the first Army Brigade Combat Team receive fielding of these tactical and urban unattended sensors?

Answer. Fielding of T–UGS/U–UGS to Spin Out Infantry Brigade Combat Teams begins in FY11.

Question. What prevents enemy forces from picking up our sensors, or booby trapping them so as to harm our soldiers when they are recovering a sensor?

Answer. The UGS sensor will send an alert to the Common Operating Picture identifying the approach of enemy forces or individuals into a sensor field by various acoustic, seismic, magnetic and imaging sensors. These sensors are also used to characterize the approach of the target. However, if disturbed, the FCS UGS incorporates anti-tamper technology alerting the FCS network and renders the "disturbed" node useless. The disturbed node must be recovered and sent back to a Depot/Contractor repair facility for rework before it can be re-issued for a future employment.

COMMON ACCESS CARDS

Question. One of the key components of force protection is controlling access to military bases or sensitive facilities within the bases. An area of special emphasis is controlling the access of non-federal, contractor employees. Access control becomes a critical area of force protection at forward deployed bases where the majority of contractor employees may be host country or third country nationals. Gentlemen, how do you rate your service for base access control both in the United States and at forward deployed locations?

Army Answer. The Army does not prescribe guidance or policy on installation or base access. This would fall under the auspices of The Office of the Under Secretary of Defense, Intelligence and US Central Command.

Marine Corps Answer. Marine Corps forces that are forward deployed maintain a strong security posture at bases and outposts. The combination of manpower, technology, tactics and Military Working Dogs give base security forces a demonstrable capacity to control access and screen personnel and equipment. Marines employ technology with proven performance, including biometric systems, surveillance systems, personnel and cargo scanning systems and barrier systems. The continuous application of Random Antiterrorism Measures by commanders ensures that: 1) Marines keep terrorists and insurgents tactically off-balance and 2) we remain "hard to kill".

USMC installations in the United States have also used the same security capabilities. The continuous application of Random Antiterrorism Measures present a number of security challenges to those who may wish to harm us. That said, there are a number of challenges for USMC installations in CONUS. These include, but are not limited to, the age of the entry control facilities, continued growth in and around our installations that limits expansion and the requirement for substantial infrastructure investment in order to implement the most effective access control procedures.

Question. The primary access control tool in use at our military bases throughout the world to include forward based facilities and outposts in Iraq and Afghanistan, is the Common Access Card (CAC). The Department of Defense Inspector General, in recent testimony before this Committee, reported serious concerns about the use of the CAC Card. Thousands of cards were not affiliated with a contract and thousands more did not have expiration dates linked to contract completion. The IG testified that contractors could approve and issue a CAC card which grants an individual unfettered access to military bases with no government oversight. One of the contractors who had issued CAC cards is KBR. The Inspector General reported that 39,000 applications for a CAC had been approved without the required background checks and about 212,000 contractor personnel had email addresses that misclassified the contractor personnel as U.S. Government personnel. The IG testified that an individual who had no affiliation to DoD (as either an employee or contractor) obtained a CAC and stole 10 million gallons of fuel from Iraq. This misidentification is also a potential security risk because individuals who obtain CAC cards could misrepresent themselves both in person and on DoD networks to improperly obtain sensitive information.

Gentlemen, are you familiar with the various problems the Inspector General identified with the issuing, use, and termination of Common Access Cards?

Army Answer. Yes. The Army was briefed regarding the DoD Inspector General Audit, Project No. D2007–D000LA–0199.001, Controls Over the Contractor Common Access Card Life Cycle.

Marine Corps Answer. The Marine Corps is aware of the findings with regards to issuance, use and termination of CACs to contractors. The Marine Corps has found no evidence that the Inspector General findings have occurred within the Marine Corps, however in light of these findings we have undertaken an aggressive audit and training initiative to ensure that those government personnel in positions to sponsor and issue CACs are abiding by and understand DoD and Marine Corps policy.

Question. What is your service doing to get control of Common Access Cards and base access control?

Army Answer. The Army does not prescribe guidance or policy on installation or base access. This would fall under the auspices of The Office of the Under Secretary of Defense, Intelligence and US Central Command.

Marine Corps Answer. The Marine Corps has consistently applied DoD, DoN and Marine Corps policy with regards to the CAC program and in doing so has maintained program control. The Marine Corps has implemented internal program reviews (audits) to ensure that:

1. The Marine Corps has appropriate policy for the issuance, use and termination of CACs, which is aligned with DoD policy.

2. All Marine Corps Contractor Verification System (CVS) Trusted Agents (TA) are government civil servant or Marines, as sponsorship for a CAC is an inherently governmental responsibility.

3. The Marine Corps applies consistent and effective corrective action. The Marine Corps has a wide range of possible corrective actions that may be taken, including training, revocation of credentials/access, and punitive action for non-compliance with DoD and Marine Corps policy.

With regard to base access control policy, the Marine Corps established a standard baseline installation access control policy throughout the Marine Corps. MARADM1N #533/08 identifies the Common Access Card (CAC) as the primary token for all Marine Corps installation access control systems. While access control systems must use the CAC as the primary token, possession of a CAC does not automatically equate to installation access. The CAC, as an authentication credential, identifies the individual and should be used in conjunction with access control policy and procedures to implement a comprehensive installation access control program.

Question. Do you agree that the best fence and most fortified entry points are rendered useless is access if given to, or perhaps sold to, an adversary?

Army Answer. Yes.

Marine Corps Answer. And in light of that threat, the Marine Corps continues to look for technological solutions that will enhance the capabilities of the staff at our access control points in an effort to effectively screen persons attempting to enter our bases, deny unauthorized access/entry, and simultaneously maintain safe and efficient movement of authorized personnel.

Question. Should there be service-wide, or Department of Defense-wide, guidance for the issuance, use and termination of contractor Common Access Cards?

Army Answer. The Office of the Under Secretary of Defense (Personnel and Readiness) DTM 08–003, "Next Generation Common Access Card (CAC) Implementation Guidance", dated 1 Dec 08 provides guidance for the issuance, use and termination of contractor Common Access Cards. This guidance will be further amplified when DoD publishes the required DODI.

Marine Corps Answer. Both the DoD and Marine Corps have published policy for the issuance, use and termination of contractor CACs. The Under Secretary of Defense, Personnel and Readiness (USD (P&R)) has published Directive Type Memorandum (DTM) 08–003, "Next Generation Common Access Card (CAC) Implementation Guidance" provides the overarching directive for the DoD. In conjunction with the USD (P&R) DTM 08–003, Headquarters, United States Marine Corps has published Marine Administrative Message (MARADMIN) 624/08 "MCBUL 5512. Homeland Security Presidential Directive (HSPD) 12 Compliance Within the Marine Corps" detailing the requirements for issuance of CACs to contractors within the Marine Corps.

Question. Did someone in the US Military give KBR authority to decide who would receive Common Access Cards?

a. If so, who was that person?

Army Answer. The Army Human Resources Command provided the Army Material Command (AMC) Logistics Civil Augmentation Program (LOGCAP) the capability to issue Common Access Cards (CAC) to DoD Contractors deploying in support of Operations Enduring Freedom and Iraqi Freedom (OEF/OIF). This authority was

given under the stipulation that CAC issuance would be in accordance with DoD policies in effect at the time and under government supervision and oversight.

b. When was the decision made? Has anyone been reprimanded for this decision to hand over the CAC vetting process to KBR?

Answer. The decision to provide a CAC issuance capability to LOGCAP was made following a formal request of 19 June 2003 from the Program Manager for LOGCAP. LOGCAP program management was responsible for ensuring that background vetting was accomplished in accordance with policies in effect at the time.

Marine Corps Answer. We have found no evidence that the Marine Corps gave KBR the authority to decide who would receive CACs. The Marine Corps follows DoD policy as issued by OUSD P&R with regard to the vetting and issuance of the common access card (CAC). Issuance of a Common Access Card to a contractor requires sponsorship by a Marine or government civilian employee. Issuance of the CAC at a Marine Corps ID Card Facility is accomplished by military, civil service or contracted employees supporting that facility. The issuance process requires a minimum of a two (2) person validation:

1. The government official acting as the sponsor through the Contractor Verification System (CVS) (CVS Trusted Agent (TA)),

The Real-time Automated Personnel Identification System Verifying Official, who validates the identity documentation and issues the CAC.

The CAC can only be issued to individuals who meet the vetting requirements; have a government sponsor; have a valid record in the Defense Eligibility Enrollment Reporting System (DEERS), and presents two forms of valid identification, one being a government issued picture ID, to the Verifying Official for validation and scanning as part of the card issuance process.

Question. Are KBR employees still approving CACs independent of DoD review?

Answer. No. Eligibility and verification for contractor CACs issued at KBR's Houston, TX deployment facility are processed by a government Trusted Agent (TA) via the Contractor Verification System (CVS).

Marine Corps Answer. We have found no evidence that KBR employees are approving CACs independent of DoD review within the Marine Corps.

Question. If no formal DoD decision was made to give KBR authority to issue CACs, has anyone from KBR been held accountable for overstepping their approved role in granting the cards?

Army Answer. KBR never had the authority to issue CAC independent of LOGCAP management and oversight.

Marine Corps Answer. This question is not applicable to the Marine Corps.

Question. If KBR did not have DoD approval to decide who would receive CACs, were DoD personnel in the field aware that KBR employees were issuing the cards in violation of their contract and DoD security guidelines?

Army Answer. The Army Human Resources Command provided the Army Materiel Command (AMC) Logistics Civil Augmentation Program (LOGCAP) the capability to issue Common Access Cards (CAC) to DoD Contractors deploying in support of Operations Enduring Freedom and Iraqi Freedom (OEF/OIF). This authority was given under the stipulation that CAC issuance would be in accordance with DoD policies in effect at the time and under government supervision and oversight.

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Marine Corps Answer. This question is not applicable to the Marine Corps.

[CLERK'S NOTE.—End of questions submitted by Mr. Murtha.]

TUESDAY, MARCH 17, 2009.

AIR FORCE MILITARY PERSONNEL

WITNESSES

HON. CRAIG W. DUEHRING, ASSISTANT SECRETARY OF THE AIR FORCE, MANPOWER AND RESERVE AFFAIRS

LIEUTENANT GENERAL RICHARD Y. NEWTON, III, DEPUTY CHIEF OF STAFF, MANPOWER AND PERSONNEL, UNITED STATES AIR FORCE

INTRODUCTION

Mr. ROTHMAN. The Committee will come to order. This morning the Committee will discuss Air Force Personnel. We are pleased to welcome the Honorable Craig Duehring, Assistant Secretary of the Air Force For Manpower and Reserve Affairs; and Lieutenant General Richard Newton, Air Force Deputy Chief of Staff for Manpower and Personnel.

The realities of the world have changed dramatically and continue to change daily. In response to these changes, the Air Force is embracing a collaborative and supportive role in the types of ground operations being conducted in Iraq and Afghanistan. In general, Air Force leaders have adjusted quickly by developing efforts to meet challenges not traditionally borne by Air Force personnel.

The Air Force has stepped up to meet these challenges. However, this places a greater demand on its personnel. Unlike the Marines and Army, which are both expanding, the Air Force has a force-shaping plan in effect to reduce personnel.

However, the Air Force ended the reductions to meet these new requirements. Air Force leaders are working toward the right mix of airmen, and the committee is very interested in what force-shaping measures the Air Force will use to recruit the right people, train them properly, maintain high standards, and grow experience in a manageable way.

We look forward to the testimony and to a spirited and informative question-and-answer session.

And now, before we hear your testimony, gentlemen, I would like to call upon Congressman Frelinghuysen, my colleague from New Jersey, who was the senior member here on the Republican side.

REMARKS OF MR. FRELINGHUYSEN

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

The record should note that both the ranking and the chairman, probably for the first time in history, are leading the debate on this public hearing. So thank you very much for the recognition.

And welcome to both of our distinguished guests.

Secretary Duehring, I note, from looking at your resume, your distinguished career. You were awarded the Silver Star; flew over 800 missions in Vietnam, that is one hell of a lot of missions.

And I want to recognize your long public service, as well, General Newton, thank you for your service.

I am told that the Air Force has been in a continual global combat engagement since 1990, and I am sure that, over the years, it has been to differing degrees of severity, but it is an extraordinary fact nonetheless. Despite this unprecedented operation tempo, the Air Force continues to reach most of its recruiting and retention goals, an impressive achievement. Yet I know that several areas remain difficult, such as medical professionals and certain enlisted retention zones.

I look forward, knowing that there is a renewed focus on the nuclear enterprise and additional Intelligence, Surveillance, Reconnaissance (ISR) mission that have caused you to reserve planning reductions to your end-strength numbers, a process that is neither quick nor cheap.

But like the Chairman this morning, I welcome you here for this very important hearing.

Thank you, Mr. Chairman.

Mr. ROTHMAN. Thank you, Congressman Frelinghuysen.

Now, Secretary Duehring, we understand that you and General Newton will each make a brief opening statement. You may proceed. Your entire statement will be placed on the record. And let me echo my friend and colleague from New Jersey, we are honored to have such two distinguished gentlemen and heroes here today. We hope that your service in your present capacities will be the crowning jewels of each of your respective distinguished and remarkable careers.

Mr. Secretary.

SUMMARY STATEMENT OF SECRETARY DUEHRING

Mr. DUEHRING. Thank you, Mr. Chairman. You set a very high standard now.

Mr. Chairman, members of the Committee, thank you for this opportunity to speak with you today about our United States Air Force's military personnel.

I want to take this opportunity to thank the members of this Committee and the entire House of Representatives for your unwavering support of our men and women in uniform and their families.

Our Airmen have been continuously deployed and globally engaged in combat missions for over 18 straight years. While we remain committed to winning today's fight in preparing for tomorrow's challenges, we have further refined our priorities. We are focusing on reinvigorating the Air Force nuclear enterprise; partnering with the joint and coalition team to win today's fight; developing and caring for Airmen and their families; modernizing our air and space inventories, organizations, and training; and recapturing acquisition excellence.

In order to continue engaging both current and emerging global threats, our recruiting mission goes beyond simply finding the right numbers. It includes ensuring the right quality and the right skills

are present in potential candidates so they can effectively support the Air Force's diverse mission.

We also continue to invest in retaining the high caliber men and women that we recruited. In fiscal year 2008, overall active duty enlisted and Air Force reserve, enlisted and officer retention rates finished below annual goals. While the active duty officer corps and the National Guard met or exceeded all of other aggregate of retention goals.

The first quarter of fiscal year 2009 shows overall active duty retention is trending slightly upward. But some of our critical stressed specialties continue to experience significant shortfalls. And we continue to rely heavily on bonuses and quality-of-life initiatives to resolve these shortages.

With the heightened operations tempo we are experiencing, we remain mindful of the increased stressed placed on our Airmen and their families. The Air Force employs a variety of screening tools to monitor Airmen's health, to enhance detection of psychological issues, and provide for early intervention when required. Almost 13 years ago, we created the Air Force Suicide Prevention program, which centers on effective education, detection and treatment for persons at risk. While we are making significant progress on suicide and mental health issues within the Air Force, we continue to work with our sister services to make our programs more effective.

Today's Airmen are clearly in this fight. As Air Force leaders, we are committed to doing our part to manage end-strength efficiently to maximize capability, recruiting and retaining the highest quality and diverse Airmen, while continuing to focus on the health, well-being and readiness of our Airmen and their families. We appreciate your continued support to the men and women of our Air Force, and I look forward to your questions.

Mr. ROTHMAN. Thank you, Mr. Secretary.

General.

SUMMARY STATEMENT OF GENERAL NEWTON

General NEWTON. Thank you, Mr. Chairman, and members of the committee, I also want to thank you for this opportunity to discuss our efforts to ensure we attract and recruit and develop and retain a high quality and diverse fighting force.

Today Airmen are fully engaged in joint operations across the globe and stand prepared for rapid response to asymmetric as well as to conventional conflicts.

The Air Force is totally committed to winning today's fight with the innovative combat spirit our airmen demonstrate on a daily basis regardless of the task. As of this morning, we have approximately 38,000 Airmen, active duty, Guard, and Reserve, deployed in support of global operations, and approximately 217,000, total force airmen supporting all 10 combatant commanders.

These airmen are doing amazing things for the joint warfighting team. Our aim is to improve capability by tapping into all available recruiting and retention sources so we do not lose the war on talent. As we prepare for an uncertain future, we are transforming the force to ensure we are the right size and shape to meet emerging global threats with joint- and battle-trained airmen. This re-

quires a commitment to invest in our people and our quality-of-life programs.

This commitment includes continued support for special paying allowances to address specific recruiting and retention concerns. And for example, the Air Force continues to develop both accession retention incentives to ensure the right mix of health professionals. Additionally, our most critical warfighting skills require special focus on retention due to the demands of the high operations tempo placed on Air Force airmen who perform such duties as para rescue and combat controller, tactical air control party and explosive ordinance disposal.

Just as important, we are committed to taking care of families and wounded warriors as an essential piece of retaining a highly effective force. Special emphasis has been placed on our reintegration efforts for our returning deployers and their families to ensure that we practically tackle any difficulties that they may experience. Our airmen and family readiness centers along with professionals in the medical community work together as a seamless team at the base level to meet the needs of our airmen and their family members.

In conclusion, our airmen are integral to the success of the joint warfighter while executing the Air Force mission and keeping the Air Force on a vector for success against any potential threats. Again, thank you for your unfailing support to the men and women and our families in our Air Force, and I look also forward to your questions.

[The joint statement of Secretary Duehring and General Newton follows:]

DEPARTMENT OF THE AIR FORCE

PRESENTATION TO THE COMMITTEE ON APPROPRIATIONS

SUBCOMMITTEE ON DEFENSE

UNITED STATES HOUSE OF REPRESENTATIVES

SUBJECT: AIR FORCE MILITARY PERSONNEL

STATEMENT OF: THE HONORABLE CRAIG DUEHRING
ASSISTANT SECRETARY OF THE AIR FORCE, MANPOWER, AND RESERVE AFFAIRS

LIEUTENANT GENERAL RICHARD Y. NEWTON, III
DEPUTY CHIEF OF STAFF, MANPOWER AND PERSONNEL
UNITED STATES AIR FORCE

MARCH 17, 2009

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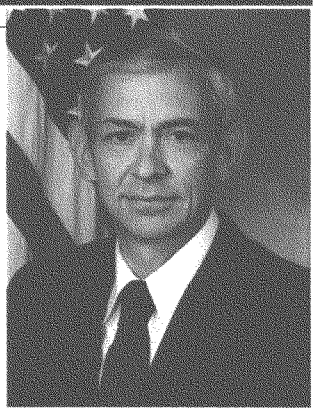
SUBCOMMITTEE ON DEFENSE

UNITED STATES HOUSE OF REPRESENTATIVES

BIOGRAPHY

UNITED STATES AIR FORCE



CRAIG W. DUEHRING

Craig W. Duehring is the Assistant Secretary of the Air Force for Manpower and Reserve Affairs, Washington, D.C. A political appointee, Mr. Duehring heads a four-division department that deals at the policy level with Air Force manpower and Reserve affairs issues. He is responsible for providing overall supervision of manpower, military and civilian personnel, Reserve component affairs, and readiness support for the Department of the Air Force.

Mr. Duehring is a 28-year Air Force veteran, having been commissioned in 1968 through Officer Training School. He is a decorated combat pilot, completing more than 800 missions during the Vietnam War as a forward air controller, including a tour as one of the Raven FACs in northern Laos. Mr. Duehring has flown more than a dozen types of aircraft, amassing more than 1,200 hours in the A-10 Thunderbolt II. He retired as a colonel in 1996. His final military assignment was U.S. Air Attaché to Indonesia.

Mr. Duehring has served on the Bush-Cheney Transition Team and the Department of Defense Transition Team. He was the Executive Director of the Patrick Henry Center for Individual Liberty, a non-profit educational and charitable foundation, and he was endorsed as the Republican candidate for the Minnesota 2nd Congressional District in 1998. Prior to his current assignment, Mr. Duehring served six years as the Principal Deputy Assistant Secretary of Defense for Reserve Affairs. He performed the duties of acting Assistant Secretary of Defense for Reserve Affairs in the absence of the Assistant Secretary of Defense for Reserve Affairs, including an extended period during and following the attacks of Sept. 11, 2001.

EDUCATION

1967 Bachelor of Science degree in history and sociology, Minnesota State University, Mankato
1975 Master's degree in counseling and guidance, Troy State University, Montgomery, Ala.
1972 Squadron Officer School
1981 Air Command and Staff College, Maxwell AFB, Ala.
1982 Fellow, Haus Rissen International Institute for Politics and Economics, Hamburg, West Germany
1983 National Security Management Course, National Defense University, Fort Lesley J. McNair, Washington, D.C.
1992 Department of State Foreign Service Institute, Washington, D.C.
2002 Fellow, National Security Studies, Maxwell School of Syracuse University, Johns-Hopkins Campus, Md.

CAREER CHRONOLOGY

1. 1968 - 1969, student, undergraduate pilot training, 3615th Flying Training Wing, Craig AFB, Ala.
2. 1969 - 1970, forward air controller, 22nd Tactical Air Support Squadron, 25th Infantry Division, Army of the Republic of Vietnam, Doc Hoa, Vietnam

3. 1970 - 1971, Raven forward air controller, Detachment 1, 56th Special Operations Wing, Udorn Royal Thai AFB, Thailand
4. 1971 - 1975, T-37 instructor pilot and flight commander, 43rd Flying Training Squadron, Craig AFB, Ala.
5. 1975 - 1978, base fuels management officer, 1st Tactical Fighter Wing, Langley AFB, Va.
6. 1978 - 1981, Flight Commander, 92nd Tactical Fighter Squadron, and Chief of Training, 81st Tactical Fighter Wing, Royal Air Force Bentwaters, England
7. 1981 - 1984, action officer, Tactical Fighter Operations Division, Headquarters U.S. Air Forces in Europe, Ramstein Air Base, West Germany
8. 1984 -1986, assistant operations officer, 510th Tactical Fighter Squadron, later, Director of Operations Training, 81st Tactical Fighter Wing, RAF Bentwaters, England
9. 1986 - 1989, American Community Commander, and Commander, 7502nd Munitions Support Squadron, Norvenich AB, West Germany
10. 1989 - 1990, assistant Deputy Commander for Operations, 406th Tactical Fighter Training Wing, Zaragoza AB, Spain
11. 1990 - 1991, Deputy Commander for Operations and Vice Commander, 406th Tactical Fighter Training Wing, Zaragoza AB, Spain
12. 1992 - 1993, student, Department of State Foreign Service Institute, Washington, D.C.
13. 1993 - 1995, U.S. Air Attaché to Indonesia
14. 2001 -2007, Principal Deputy Assistant Secretary of Defense for Reserve Affairs, Washington, D.C.
15. 2007 - present, Assistant Secretary of the Air Force for Manpower and Reserve Affairs, Washington, D.C.

AWARDS AND HONORS
Silver Star
Defense Superior Service Medal
Distinguished Flying Cross with oak leaf cluster
Meritorious Service Medal with three oak leaf clusters
Air Medal with 26 oak leaf clusters
Air Force Commendation Medal with oak leaf cluster
Republic of Vietnam Gallantry Cross
Republic of Vietnam Staff Service Medal (First Class)

OTHER ACHIEVEMENTS
1987 Lance P. Sijan Award, senior officer category
2008 Exceptional Civilian Service Award

(Current as of September 2008)

BIOGRAPHY

LIEUTENANT GENERAL RICHARD Y. NEWTON III

Lt. Gen. Dick Newton is the Deputy Chief of Staff for Manpower and Personnel, Headquarters U.S. Air Force, Washington, D.C. General Newton serves as the senior Air Force officer responsible for comprehensive plans and policies covering all life cycles of military and civilian personnel management, which includes military and civilian end strength management, education and training, compensation, resource allocation, and the worldwide USAF services program.

Born at Forbes Air Force Base, Kan., General Newton hails from an Air Force family and graduated from the U.S. Air Force Academy in 1978. His command assignments include the first B-2 squadron, a B-1B operations group and a B-52 wing. He served at Headquarters U.S. Air Force as a planner and then executive officer for the Deputy Chief of Staff for Plans and Operations, and later as Deputy Director for Strategic Plans and Future Systems for the Deputy Chief of Staff for Personnel. His joint assignments include serving as the executive assistant to the Director, Strategic Plans and Policy (J5), with later assignment as Deputy Director for Information Operations, and Deputy Director for Global Operations in the Operations Directorate (J3) on the Joint Staff, followed by duty as the Director, Plans and Policy (J5), U.S. Strategic Command. Most recently he served as the Assistant Deputy Chief of Staff for Operations, Plans and Requirements, Headquarters U.S. Air Force.

General Newton is a command pilot with over 2,900 flying hours in a variety of aircraft, including the B-2, B-1B, B-52 and T-38.

EDUCATION
1978 Bachelor of Science degree in history, U.S. Air Force Academy, Colorado Springs, Colo.
1983 Master of Arts degree in management, Webster University, St. Louis, Mo.
1991 Air Command and Staff College, Maxwell AFB, Ala.
1996 Master of Science degree in national security strategy, National War College, Washington, D.C.
2000 National Security Management Course, The Maxwell School, Syracuse University, N.Y.
2004 National Security Leaders Course, The Maxwell School, Syracuse University, N.Y.
2005 Executive Program for Russian and U.S. General Officers, John F. Kennedy School of Government, Harvard University, Cambridge, Mass.
2006 Joint Flag Officer Warfighting Course, Maxwell AFB, Ala.
2008 Leadership at the Peak, Center for Creative Leadership, Colorado Springs, Colo.
2008 Pinnacle, Joint, Coalition and Interagency Studies, National Defense University, Fort Lesley J. McNair, Washington, D.C.

ASSIGNMENTS
1. July 1978 - November 1979, student, undergraduate pilot training, Laughlin AFB, Texas
2. November 1979 - September 1983, T-38 instructor pilot and assistant wing executive officer, 47th

Flying Training Wing, Laughlin AFB, Texas
3. September 1983 - October 1984, Air Staff training assignment, Washington, D.C.
4. October 1984 - December 1987, B-52G aircraft commander, instructor pilot and flight examiner, 379th Bomb Wing, Wurtsmith AFB, Mich.
5. December 1987 - May 1989, planner, Strategic Offensive Forces Division, Headquarters U.S. Air Force, Washington, D.C.
6. May 1989 - July 1990, assistant executive officer, Deputy Chief of Staff for Plans and Operations, Headquarters U.S. Air Force, Washington, D.C.
7. July 1990 - June 1991, student, Air Command and Staff College, Maxwell AFB, Ala.
8. June 1991 - August 1993, B-1B aircraft commander, instructor pilot, flight commander and squadron operations officer, 28th Bomb Wing, Ellsworth AFB, S.D.
9. August 1993 - August 1995, Commander, 393rd Bomb Squadron, Whiteman AFB, Mo.
10. August 1995 - June 1996, student, National War College, Washington, D.C.
11. June 1996 - July 1997, Chief, Initiatives Branch, Deputy Director for International Negotiations, Strategic Plans and Policy, the Joint Staff, Washington, D.C.
12. July 1997 - July 1998, Chief, Long Range Policy Planning cell, then executive assistant to the Director, Strategic Plans and Policy, the Joint Staff, Washington, D.C.
13. July 1998 - January 2000, Commander, 28th Operations Group, Ellsworth AFB, S.D.
14. February 2000 - December 2001, Commander, 5th Bomb Wing, Minot AFB, N.D.
15. December 2001 - August 2002, Deputy Director, Developing Aerospace Leaders Support Office, Deputy Chief of Staff for Personnel, Headquarters U.S. Air Force, Washington, D.C.
16. August 2002 - August 2003, Deputy Director, Strategic Plans and Future Systems, Deputy Chief of Staff for Personnel, Headquarters U.S. Air Force, Washington, D.C.
17. August 2003 - April 2004, Deputy Director for Information Operations, Operations Directorate, the Joint Staff, Washington, D.C.
18. April 2004 - July 2005, Deputy Director for Global Operations, Operations Directorate, the Joint Staff, Washington, D.C.
19. July 2005 - July 2006, Director, Plans and Policy (J5), U.S. Strategic Command, Offutt AFB, Neb.
20. July 2006 - January 2008, Assistant Deputy Chief of Staff for Operations, Plans and Requirements (A3/5), Headquarters U.S. Air Force, Washington, D.C.
21. January 2008 - present, Deputy Chief of Staff for Manpower and Personnel (A1), Headquarters U.S. Air Force, Washington, D.C.

FLIGHT INFORMATION
Rating: Command pilot
Flight hours: More than 2,900
Aircraft flown: B-2, B-1B, B-52G and T-38

MAJOR AWARDS AND DECORATIONS
Defense Superior Service Medal with two oak leaf clusters
Legion of Merit
Meritorious Service Medal with silver oak leaf cluster
Air Force Outstanding Unit Award with "V" device and three oak leaf clusters
Combat Readiness Medal

EFFECTIVE DATES OF PROMOTION
Second Lieutenant May 31, 1978
First Lieutenant June 1, 1980
Captain June 1, 1982
Major March 1, 1988
Lieutenant Colonel March 1, 1992
Colonel Oct. 1, 1996
Brigadier General Aug. 1, 2003
Major General May 26, 2006
Lieutenant General Jan. 7, 2008
(Current as of January 2009)

Introduction

Mr. Chairman, members of the Committee, thank you for this opportunity to discuss the Airmen who serve in the world's most respected Air Force. Our Airmen have been continuously deployed and globally engaged in combat missions for over eighteen straight years—since the first F-15 touched down in Saudi Arabia in August 1990. Today, Airmen are fully engaged in joint operations across the globe and stand prepared for rapid response to asymmetric as well as conventional conflicts.

While we remain committed to winning today's fight, and preparing for tomorrow's challenges, we've further refined our priorities. We are focusing on reinvigorating the Air Force nuclear enterprise; partnering with the joint and coalition team to win today's fight; developing and caring for Airmen and their families; modernizing our Air and Space inventories, organizations, and training; and, recapturing acquisition excellence. These priorities will shape the strategic landscape that currently foreshadows significant challenges to our organization, systems, concepts, and doctrine. We are at a historic turning point demanding an equally comprehensive evolution. The future strategic environment will be shaped by the interaction of globalization, economic disparities and competition for resources; diffusion of technology and information networks whose very nature allows unprecedented ability to harm, and potentially, paralyze advanced nations; and systemic upheavals impacting state and non-state actors, and thereby, international institutions and the world order.

The Air Force undertook significant personnel reductions to free resources to reprogram towards recapitalizing and modernizing essential air, space, and cyber systems, congruent with our priorities. The impact on our warfighting Airmen has been significant. We were compelled to make some very tough decisions with respect to our people. Fewer platforms that require fewer operators and maintainers were part of the equation. We are continuing to take a hard look at all our processes and streamlining our organizations. However, we want to ensure that

we continue to attract, recruit and retain high caliber men and women who are the cornerstone of our Air Force, and that we properly shape the force to fulfill our priorities.

End Strength

As of the fiscal year (FY) 2009 President's Budget request, the current approved Air Force Total Force end strength is 316,600 Active Duty (AD) effective FY09 through FY13; 171,313 civilians effective FY09, ramping to 172,412 by FY13; 67,400 Reservists effective FY09, ramping to 67,700 by FY13; and 106,700 Guardsmen effective FY09 through FY13. Summer 2008, Secretary Gates announced halt of active military drawdown at 330,000. As of January 31, 2009, AD actual end strength is 329,651 (64,524 officers, 260,697 enlisted, and 4,430 cadets); civilian actuals 160,875; reserve actuals 65,842 (14,500 officers, 51,342 enlisted); and guard actuals 108,119 (14,168 officers, 93,951 enlisted).

Our forces support our traditional ongoing Air Force missions and new/emerging missions. These missions include Intelligence, Surveillance & Reconnaissance (Reaper, Distributed Common Ground Systems, and MC-12); B-52/Nuclear Enterprise (Air Force Global Strike Command, HAF/A10, and Barksdale WSA); Cyber NAF; SOCOM; Aircraft Maintenance; OSD/Joint; and civilian administration for Squadron Commander's Support Staff.

Joint Expeditionary Tasking

Deployments for standard Air Force requirements or in support of Joint Operations are not part of the equation when projecting end strength. Regardless, the Air Force continues its role in combating the Overseas Contingency Operations even as requirements continue to grow. The Air Force provides critical capabilities as an integral part of the Joint team. A portion of the capabilities we deliver have, until very recently, been designated as "In-Lieu-Of" (ILO). However, the Department of Defense enacted several changes to Joint terminology that replaces most ILO designations with Non-Standard Solutions terms such as "AD HOC" and Joint Force/Capability Solution. These new terms refine the categorization method and more

accurately describe the nature of the respective tasks; the Air Force has emphasized our contribution to the fight and Joint team with a single term. The Joint Expeditionary Tasking (JET) properly characterizes our combat-focus mindset and our joint posture.

The Air Force is fully committed to winning today's fight with the innovative combat spirit our Airmen demonstrate on a daily basis regardless of the task. As of February 18, 2009, we have approximately 35,000 Active Duty, Guard and Reserve Airmen (Total Force) deployed in support of global operations, and 208,000 Total Force Airmen supporting daily combatant commander operations. 3,500 of those Airmen are specifically supporting JET missions in Iraq and Afghanistan and approximately 560 supporting JET missions in other countries.

In calendar year 2008, the Air Force received 4,917 JET requirements. The Air Force was able to respond to the vast majority of these requirements, and any remaining requirements were redirected to another Service, negotiated for a smaller requirement, or the in-place unit absorbed the workload. The majority of these additional tasks required stressed or over taxed officer and enlisted career fields such as Security Forces, Combat Control, Operations Intelligence, and Air Field Operations.

Recruiting

In order to continue engaging current and emerging global threats, our recruiting mission goes beyond finding the right numbers. It includes ensuring the right quality and right skills are present in potential candidates so they can effectively perform and support the Air Force's diverse missions. One key component of our recruiting effort is a renewed commitment to diversity. We must focus on attracting and recruiting from all backgrounds so we capitalize on the talent available throughout America. Subsequently, this will represent a true demographic reflection of a changing American landscape. We are working on a game plan with our recruiting and accession sources to tap into our diverse eligible population. Today, only 27% of the American youth population between the ages of 17 and 24 are qualified for military service (Woods & Pooles, 2006). However, we will continue to apply rigorous selection criteria to those

approaching the Air Force in order to effectively match future Airmen skills and attributes with our essential combat requirements.

Our recruiting force continues to achieve the enlisted accession mission with integrity and excellence. In FY08, we met mission requirements for enlisted recruiting in all components (Active, Guard, and Reserve). In fact, the Air Force Reserve met recruiting goals for the eighth straight year, and the Air National Guard managed to exceed end strength for the first time in six years, ending the year 979 accessions over the established goal.

For FY09, the enlisted active-duty requirement is 31,980, and 11,827 new Airmen have accessed. There are 9,334 more signed and waiting to enter basic military training, for a current total of 66% of the annual enlisted Active Duty accessions goal. To date in FY09 we have achieved 100% of our active-duty accession goals and 100% and 120% of our Reserve and Guard accession goals, respectively.

The Air Force Recruiting Service has also had 100% success at filling every requirement for physically demanding and highly skilled "hard-to-fill" jobs since 2001. With Congressional assistance and our recruiter's hard work, we continue to meet all requirements for Combat Controller, Para rescue, Tactical Air Control Party, Explosive Ordinance Disposal, Security Forces, Linguist, and Survival, Evasion, Resistance, and Escape instructor. Recruits who choose to enter these career fields are offered an initial enlistment bonus ranging from $2,000 to $13,000, depending on the job and term of enlistment. These fields are offering enlistment bonuses for FY09.

We have achieved mission goals in our line officer accession programs, but we continue to struggle with health professions officer programs. In FY08, the line officer active-duty requirement was 3,162 and we accessed 2,964 (94%) line specialties: Pilot, Combat Systems Officer, Air Battle Manager, and Technical/Non-technical. For FY09, the line officer active-duty requirement is 3,459 and 985 new officers have already assessed, so we are on track for 100%.

For FY08 health professions, we recruited 42 doctors (18.4% of requirement), 28 dentists (37.8%), 226 nurses (69.5%), 128 biomedical scientists (39.9%), and 36 medical administrators (102.9%). For FY09, we have currently recruited 15 doctors (12.7% of requirement), 14 dentists (66.7%), 136 nurses (49.5%), 65 biomedical scientists (19%), and 35 medical administrators (100%). Considerable challenges exist for attracting candidates from this lucrative civilian market. Therefore, we've implemented a long-term "grow our own" strategy by offering more medical school scholarships in student-based markets. In FY08, we filled 431 of 437 available scholarships (98.6%). For FY09, we have 449 available scholarships and 203 are already committed (45.2%). Since spring medical school acceptance letters have yet to be released from most institutions, we are on goal for this year.

Officer accessions remain a challenge for the Air National Guard, as the Guard competes for the same talent pool as the Regular Force and Air Force Reserve. Currently, the Guard has only reached 42.1% of the year to date goal. All of the components are having particular trouble in the Health Professions, Chaplains, Engineers, Intelligence and Mobility aviators. The Guard raised the recruiting numbers in the non-prior service market to account for the lag in prior service recruiting numbers. While the non-prior service market has proven to be a lucrative talent pool, we need to continue to focus on recruiting the prior service market as well. In 2008, through the use of In-Service Air National Guard recruiters strategically placed at active duty bases, the Air National Guard garnered approximately 1,140 confirmed accessions. This is a good news story because, rather than lose the talent to the private sector, the Active Component can transfer that experience to the Reserve and Guard.

Retention

We are on track toward meeting our priorities because we continue to invest in retaining the high caliber men and women that we recruited, trained and developed. While the FY08 overall Active Duty enlisted and Air Force Reserve enlisted and officer retention rates finished below annual goals, the Active Duty officer corps and the National Guard met or exceeded all

other aggregate retention goals. This positive trend has continued into FY09; as of the end of the 1st quarter, FY09 (December 2008) all components were meeting or exceeding goals. Although, the first quarter of FY09 shows overall Active Duty retention is trending slightly upward, some of our critical/stressed specialties continue to experience significant shortfalls and we continue to rely heavily on bonuses and quality of life initiatives to resolve these shortages.

Among the officer corps while retention is strong, a few pockets of concern exist among the Health Professions, Control & Recovery, and Contracting. An additional $65 million in medical bonuses was approved for FY09 to target physicians, nurses, dentists, and biomedical specialists such as psychologists and social workers. A new Control & Recovery Critical Skills Retention Bonus (CSRB) has been approved. A similar CSRB package for contracting officers is currently in coordination.

The Air Force's ability to retain experienced healthcare personnel past their initial commitment has declined—compounding our recruiting challenges. The retention at the 10-year point is ~ 27% for physicians, ~40% for dentists, ~31% for nurses, ~33% for biomedical sciences officers and ~64% for administrators. The Air Force continues to develop both accession and retention incentives to ensure the right mix of health professionals.

Despite finishing below FY08 goals in September 2008, the year marked a turning point for enlisted retention which has since trended upward in all three zones. We are however, still slightly below goal in Zones A (17 months through six Years of Service, (YOS)) and C (ten YOS through 14 YOS). Even with this success at the aggregate level, some individual enlisted specialties in the active Air Force did not achieve their overall retention goal, including: Aerial Gunner, Mid East Crypto Linguist, Imagery Analysis, Operations Management, and Contracting. Our most critical warfighting skills require a special focus on retention to maintain combat capability due to critical manning and the demands of increased operations tempo placed on career fields including Para rescue, Combat Control, Tactical Air Control Party, and Explosive Ordnance Disposal. Budget support for retention programs is critical to effectively manage the

force and preserve needed warfighting capability. These programs are judiciously and effectively targeted to provide the most return-on-investment in both dollars and capability.

The Air Force Reserve continued to execute force structure changes in FY08 in the form of BRAC and internal DoD decisions prompting a reduction of over 7,000 positions. As a result, we again missed our standard officer and enlisted retention targets of 92% and 87% respectively but were still within acceptable limits for retention. Ironically, while we'd previously noticed a gradual decrease in First Term and Career Airmen reenlistments/extensions from FY05-07, in FY08 we saw a dramatic upswing for First Termers, 82% vs. 58% in FY07, and a modest gain for Career Airmen of 75% vs. 67% in FY07. Second Term reenlistments and extensions fell slightly for the third straight year from 58% in FY07 to 55% but this is perhaps the largest population of airmen affected by force shaping. We are currently evaluating our Air Reserve Component incentive programs and making appropriate adjustments to ensure we retain our best and brightest airmen.

The Selective Reenlistment Bonus (SRB) continues to be our most effective monetary retention tool. We appreciate continued Congressional support for our efforts. The SRB funding budgeted for FY09 is sufficient to address current retention concerns and address grade/skill imbalances. The Air Force is now well-positioned (considering the $88.8 million plus up in the SRB budget) to meet FY09 retention goals and ensure we retain the right Airmen, with the right skills, at the right time in order to meet our expeditionary requirements.

Our Airmen are committed to serving, including those experiencing high deployment rates. Combatant Commander (COCOM) requirements and the Overseas Contingency Operations levy a high demand for pilots, navigators, intelligence, control and recovery, contracting, civil engineers, and security forces officers as well as enlisted Airmen in aircrew, special operations, intelligence, vehicle operators, civil engineering, and security forces.

Despite an increased operations tempo and deployment rate the Air Force continues to achieve acceptable retention levels across the officer and enlisted force.

Finally, we understand that support to families is vital to Air Force retention. Working together with their spouses and families, Airmen make a decision to stay in the Air Force based on many factors, one of which is the quality of service they and their families receive. We have found that caring for families has a direct impact on mission readiness from available and affordable child care to dependent education support to spouse employment assistance. When families are taken care of Airmen are free from distractions and are better able to focus on the mission at hand. We are committed to ensure our Airmen can rest easy, knowing the Air Force is taking care of their family.

Stop-Loss

Our focused commitment on retaining the right Airmen in the right skills has enabled the Air Force to meet the warfighting commanders' needs without the use of Stop-Loss. The Air Force's last Stop-Loss implementation occurred during the initial stages of Operation Iraqi Freedom (OIF), from March 2003 through June 2003. The Air Force initially targeted 43 officer and 56 enlisted high-demand career fields, affecting 6,172 Active Duty officers, 4,858 Active Duty enlisted, 834 Guard/Reserve officers, and 3,030 Guard and Reserve enlisted members. Monthly reviews allowed us to release career fields no longer critical to OIF requirements, and the Air Force terminated all use of Stop-Loss June 23, 2003. Since that time, your support of our retention tools such as Selective Reenlistment and Critical Skill Retention Bonuses, Assignment Incentive Pay, Aviation Continuation Pay, and other key battlefield monetary incentives has allowed the Air Force to meet the demands of the Overseas Contingency Operations and avoid using Stop-Loss. While we cannot guarantee the Air Force will not be forced to execute Stop-Loss again, your continued support for our retention programs is essential.

Air Force Suicide Rates and Prevention Programs

We recognize the personal tragedy of any suicide attempt. While any discussion here will necessarily focus on statistics and measure effectiveness through quantifiable data, each case represents a unique scenario and personal crisis for one of our Airmen. Each incident further ripples through family, friends, co-workers and the community.

The Air Force has experienced a slight increase in the suicide rate for CY08 of 11.5 suicides per 100,000 people when compared to its ten-year average of 9.7 suicides per 100,000. Since the beginning of major combat operations in Iraq, the five-year average (CY03-08) for Air Force suicides is 11 per 100,000. These rates, though slightly increasing, are below the long-term averages (1950-2005) for the overall U.S. population of 13.7 per 100,000 and 22.2 per 100,000 for 20-44 year old U.S. males.[1]

We have unfortunately experienced a small number of suicides thus far in 2009, consistent with identified suicide trends during the full reporting year of 2008. The Air Force experienced 38 suicides by Active Duty members in 2008, with some observable patterns. Thirty-six of the suicide victims were male (95%) while there were two female victims (5%). Officers accounted for four suicides (11%), while the other 34 were spread across the enlisted ranks. Over half of the victims were married (55%). For comparison, of the Active Duty Air Force population, nearly 20% are women, 20% are officers, and 60% are married. Another identifiable trend is the presence of firearms in 58% of the incidents. Medical record reviews of recent victims also indicate that a majority of victims had utilized some form of mental health services for issues ranging from alcohol abuse to marriage counseling. There does not appear to be a strong correlation between deployments and suicide, with only one Airman committing suicide while deployed in Afghanistan in 2007. From 2003 to 2008, 39 suicide victims had deployed in the previous 12 months but 150 victims had never deployed.

[1] Data provided by the Suicide Prevention Resource Center

In response to recent suicides, our Air Force Chief of Staff, General Norton Schwartz, communicated the importance of supporting Airmen in distress to all Air Force Major Command (MAJCOM) commanders. We have also re-invigorated the components of the Air Force Suicide Prevention Program with a renewed focus on the following areas:

- Male E1-E4s between the ages of 21 and 25 are at the highest risk for suicide.
- Relationship problems continue to be a key risk factor.
- Members who receive care from multiple clinics or agencies are at high risk for a poor hand-off.
- Airmen appear most at risk to commit suicide between Friday and Sunday, highlighting the need by leadership to stress weekend safety planning.
- Good communication between commanders, first sergeants and mental health providers and staff is critical for the success of this team effort.

We are giving renewed attention to the 11 initiatives in our Air Force Suicide Prevention Program with a leadership emphasis on help-seeking behaviors, stigma reduction, and managing personnel in distress. Our wingman concept develops a culture of looking out for fellow Airmen. We are also standardizing risk assessments and enhancing treatment of suicidal members while providing high-quality annual training on suicide risk factors to all Airmen.

Air Force Suicide Prevention Program

The Air Force has a long history of focusing on suicide prevention and is recognized as a key leader in this field. This program was initiated in 1996 with the purpose of reducing the number of lives lost to suicide and the program has achieved dramatic results. The pre-Air Force Suicide Prevention Program (AFSPP) suicide rate from 1987 to 1996 was 13.5 suicides per 100,000. The post-AFSPP suicide rate average from 1997 to 2008 is 9.8 suicides per 100,000, resulting in a 28% rate reduction. The AFSPP centers on effective education, detection and treatment for persons at risk. Since its inception, the AFSPP has heightened community awareness of suicide and suicide risk factors. Additionally, it has created a safety net that provides protection and adds support for those in trouble. The AFSPP is a nationally recognized benchmark program and was the first suicide prevention program to be listed on the

Substance Abuse and Mental Health National Registry of Evidence-Based Programs and Practices.

There is no easy solution to preventing suicides; it requires a total community effort using the full range of tools at our disposal. However, we have seen a marked difference through the AFSPP. Going forward, the Air Force is committed to continued emphasis on the proven AFSPP as the best approach to dealing with those at risk of suicide.

The AFSPP is a commander's program. Each of the 11 initiatives in the AFSPP represents a tool available to commanders. It is the responsibility of every base commander to ensure the 11 initiatives are fully implemented as we continue to develop effective tools to assist potential victims.

Air Force Suicide Prevention Program Initiatives

The Air Force Suicide Prevention Program consists of 11 specific policy and training initiatives which collectively comprise our approach to taking care of our Airmen in this critical area. These initiatives include:

1. **Leadership Involvement.** Air Force leaders actively support the entire spectrum of suicide prevention initiatives in the Air Force community. Regular messages from the Air Force Chief of Staff, other senior leaders and base commanders motivate Airmen to fully engage in suicide prevention efforts.
2. **Addressing Suicide Prevention Through Professional Military Education.** Suicide prevention education is included in all formal military training.
3. **Guidelines for Commanders: Use of Mental Health Services.** Commanders receive training on how and when to use mental health services and their role in encouraging early help-seeking behavior.
4. **Community Preventive Services.** Community prevention efforts carry more impact than treating individual patients one at a time. The Medical Expense and Performance

Reporting System (MEPRS) was updated to effectively track both direct patient care activities and prevention services.

5. **Community Education and Training.** Annual suicide prevention training is provided for all military and civilian employees in the Air Force.
6. **Investigative Interview Policy.** The period following an arrest or investigative interview is a high-risk time for suicide. Following any investigative interview, the investigator is required to hand-off the individual directly to the commander, first sergeant or supervisor. The unit representative is then responsible for assessing the individual's emotional state and contacting a mental health provider if any question about the possibility of suicide exists.
7. **Trauma Stress Response (formerly Critical Incident Stress Management).** Trauma Stress Response teams were established worldwide to respond to traumatic incidents such as terrorist attacks, serious accidents or suicide. These teams help personnel deal with their reactions to traumatic incidents.
8. **Integrated Delivery System (IDS) and Community Action Information Board (CAIB).** At the Air Force, MAJCOM, and base levels, the IDS and CAIB provide a forum for the cross-organizational review and resolution of individual, family, installation and community issues that impact the readiness of the force and the quality of life for Air Force members and their families. The IDS and CAIB help coordinate the activities of the various agencies at base level to achieve a synergistic impact on community problems.
9. **Limited Privilege Suicide Prevention Program.** Patients at risk for suicide are afforded increased confidentiality when seen by mental health providers as part of the Limited Privilege Suicide Prevention Program. Additionally, Limited Patient-Psychotherapist Privilege was established in 1999, limiting the release of patient information to legal authorities during UCMJ proceedings.

10. **IDS Consultation Assessment Tool (formerly Behavioral Health Survey).** The IDS Consultation Assessment Tool was released in December 2005. This tool, administered upon the request of the commander, allows commanders to assess unit strengths and identify areas of vulnerability. Commanders can use this tool in collaboration with IDS consultants to design interventions to support the health and welfare of their personnel.
11. **Suicide Event Surveillance System.** Information on all Air Force Active Duty suicides and suicide attempts are entered into a central database that tracks suicide events and facilitates the analysis of potential risk factors for suicide in Air Force personnel.

To further enhance the AFSPP program, we are focusing our prevention efforts on effective detection and treatment. The Air Force implemented computer-based training in 2007 as part of the Chief of Staff's Total Force Awareness Training initiative, and continues to monitor the impact of this training through ongoing research studies. The Air Force has also recently introduced a new tool for leadership known as the Frontline Supervisors Training. This half-day voluntary class enhances supervisor skills for assisting Airmen in distress.

Air Force Support Programs

In support of our AFSPP initiatives, we have also developed other programs dedicated to recognizing and aiding Airmen at risk. Our Air Force Community and Family Readiness programs follow a community-based approach and build resilience and strength in Airmen and their families by equipping them with the skills to adapt to the demands of military life.

These programs provide early interventions to support Airmen and families at risk. They also help families cope with issues such as relocation and transition assistance and assist families with deployment and reintegration. Further, to support the unique situations that our Airmen and their families face as part of the military lifestyle, we offer Military Life Consultants. We have added Military Life Consultants to each base to provide coaching and education in a wide-variety of life skills including communication, anger management, conflict resolution, parenting, social issues, deployment stress and emotional well-being. Life skills sessions are

conducted in either a group setting or through individual consultations and are available to the total force. In addition, our community readiness consultants (CRCs) provide transition assistance, financial aid counseling, employment assistance, resume writing skills, and a variety of other services to our wounded Airmen and their families. CRCs focus on minimizing negative financial consequences by providing financial management services including methods to maximize lump sum payments and other monetary entitlements. Assistance includes helping families develop comparative spending plans based on projected future income, and insuring referral to agencies that may ease the financial burden facing family and/or member. These professionals also provide many of these same services to Airmen who are transitioning out of the Air Force.

One last avenue for assistance is Military OneSource. Through the Military OneSource program, the Air Force provides an information hotline that is available twenty-four hours a day, seven days a week, and allows for immediate referrals into the mental health system. These programs provide the necessary support networks, education, skill-building services, and counseling to help Airmen at risk successfully adapt to their current environment.

Deployment and Psychological Health

The current environment for many of our Airmen is one of increased operational tempo and includes more frequent and longer deployments. With this heightened operations tempo, we remain mindful of the increased stresses and requirements placed on our Airmen and their families. The Air Force employs a variety of screening tools to monitor Airmen's health, increase awareness of psychological issues and provide for early intervention when required.

All Airmen are screened for mental health concerns upon accession and annually via the Preventive Health Assessment (PHA). Additionally, those that deploy complete a Post-Deployment Health Assessment (PDHA) at the time they leave theater and 90 to 180 days after returning from deployment complete the Post-Deployment Health Reassessment (PDHRA).

At an enterprise level, the PHDA identifies Airmen exposed to trauma in theater. The Air Force tracks symptoms from all Airmen exposed to trauma in theater to identify Air Force-wide trends. The PHA/PDHA/PDHRA process facilitates the identification and treatment of Airmen with significant trauma exposure history and/or traumatic stress symptoms. It also increases awareness by commanders and unit members who can refer Airmen to appropriate Military Treatment Facilities. Additionally, the PHA/PDHA/PDHRA screen also identifies depression, alcohol abuse, and family problems that are all warning signs of at-risk Airmen.

The PDHRA completion rate for Active Duty Airmen is 89%. Nearly half of the PDHRA participants screened positive for physical or emotional symptoms. Of these, 80% receive medical follow-up within 30 days. The PDHRA is a survey with a positive algorithm that is intentionally overly sensitive to act as an initial filter for possible medical assistance.

Landing Gear Program

Just as an aircraft's landing gear serve as the critical component during launch and recovery, we recognize that the time immediately surrounding departure and homecoming are critical phases of a deployment for Airmen. Our Landing Gear Program is centered on effective risk recognition and help-seeking for Airmen during these difficult times of adjustment. Landing Gear serves as a bridge to care designed to increase the recognition of Airmen suffering from traumatic stress symptoms and connect them with helping resources. It provides a standardized approach to the mental health requirements for pre-exposure preparation training for deploying Airmen and reintegration education for redeploying Airmen.

Twenty percent of Airmen in theater are exposed to traumatic events. Groups at the highest risk include security forces, explosive ordnance disposal crews, medics, Airmen imbedded with other service combat units, and those with multiple deployments or deployments greater than 180 days. This exposure to battlefield trauma places Airmen at risk for Post-Traumatic Stress Disorder (PTSD) and other mental health problems. While less than 2% of

deploying Airmen develop PTSD, the brief training developed for Landing Gear is effective at identifying those at risk and getting them the necessary help. Recent data suggests that prompt medical intervention greatly improves the outcomes for Airmen dealing with PTSD and related mental injuries.

Psychological Health Treatment and Management

The signature injury to our Airmen and troops in the current conflicts may be Traumatic Brain Injury (TBI). We are training our medical professionals to recognize and effectively deal with TBI. Flight Nurse, Aeromedical Evacuation Technician and Critical Care Air Transport Team courses all now provide training on TBI. We are making significant progress in training first responders to injured warriors by updating our training objective this year to accomplish in-theater TBI assessment.

We have also made psychological health treatment more accessible to our Airmen. Since 2007, the Air Force has hired 97 contract mental health providers. Our standard of access for routine appointments is seven days. We have trained an additional 400 mental health providers on optimal PTSD treatment solutions to better deal with an increasing number of Airmen suffering from PTSD.

Finally, we have made significant progress in decreasing the stigmas attached for Airmen seeking help with mental issues. Our mental health providers have been placed in primary care clinics to emphasize the similarities of treatment for mental and physical conditions. Air Force leaders advocate for help-seeking behavior in multiple forums and we are emphasizing a culture where seeking help is seen as a virtue rather than a failure.

Participation in DOD and Veterans Affairs (VA) Programs and Care for our Wounded Warriors and their Families

While we are making significant progress on suicide and mental health issues within the Air Force, we are fully committed to partnering with our Sister Services and interagency associates. Other military services have enjoyed successes with recent programs. The Air

Force collaborates with our Sister Service suicide prevention offices to share and adopt best practices. The Army has recently developed a series of interactive videos that we are exploring to determine adoption into our own suicide prevention efforts. The Air Force is completely engaged with the Defense Center of Excellence to address psychological health and TBI issues that are experienced across the Joint Force. We are fully committed to participating in the medical advances and ground-breaking work that occurs in this area.

Our Air Force Warrior and Survivor Care program provides immediate assistance and follow-on support to all seriously wounded Airmen and their families. Support starts with the assignment of a Family Liaison Officer when a wounded, ill, or injured Airman is medically evacuated from the area of responsiblity; it continues until the Airman is returned to duty, or for a minimum of 5 years after medical retirement or separation. Our Wounded Warrior program staff provides regular follow-up and offers a wide variety of assistance and referral services to the over 380 Airmen enrolled in the program. Post-traumatic stress disorder (PTSD) is by far the most prevalent wound of war among those who have been medically retired or separated as a result of their service in OIF and Operation Enduring Freedom (OEF), with nearly 70% of our separated war-wounded suffering from PTSD. We work closely with the Department of Veterans Affairs and other organizations to ensure our wounded are provided the support and services they need. We personally follow up with our wounded Airmen and their families to ensure they are aware of services available and to verify they are attending medical and counseling appointments with the Department of Veterans Affairs representatives. This follow-up is particularly important for those who suffer from PTSD, especially if their condition results in difficulty with cognition. We have also added Recovery Care Coordinators (RCCs) to navigate our seriously wounded, ill, and injured Airmen through the non-clinical phases of their recovery. Serous injuries have a life-altering effect on our Airmen. The role of the RCC is to guide our Airmen through the recovery process and help them establish long-term goals for their careers, whether they continue in the Air Force or seek work in the civilian community.

We are increasing our staffing in both the Wounded Warrior and the Recovery Care Coordinator programs to provide additional Wounded Warrior counselors and RCCs. Our ratio of Wounded Warrior Counselors to wounded Airmen is far too high at approximately 1:70; the RCC program is in its infancy, with only two positions thus far funded for FY 09 through an OSD initiative that was mandated by Congress. The Recover Care Coordinator program has a chance to be one of the best tools for out wounded, ill, and injured Airmen once it is fully brought on line.

One of our priorities is to work closely with the VA to perform smooth transitions for returning OIF/OEF veterans and ensure their continued healthcare. Our goal is to keep wounded Airmen on active duty until we are assured that they have received all necessary follow up care, and should a combat wounded Airman want to reenlist, we will provide every opportunity for them to remain a part of the Air Force team. In fact, we have recently formalized policies that will afford our wounded Airmen opportunities for retention, priority retraining, and promotions. If Airmen are separated from active duty, they are covered by the TRICARE Transitional Health Care Program until their transition to VA is completed.

It is our solemn pledge that all combat wounded and other disabled veterans engaged in OIF/OEF will receive complete information and assistance in obtaining all services from the Air Force, DOD, the VA, and the Department of Labor to which they are entitled by virtue of their service to their country.

Conclusion

Today's Airmen are doing amazing things to meet the needs of the joint warfighter, execute the Air Force mission and keep the Air Force on a vector for success against potential future threats in an uncertain world. We are ready and engaged today, but we must continue to invest to ensure tomorrow's air, space, and cyberspace dominance. Our aim is to improve capability while maintaining the greatest combat-ready Air Force in the world. Through game-

changing capabilities in vigilance, reach and power, both on and above the globe, Airmen are "all in," and delivering for the Joint team. Airmen are doing their part everyday to "*fly, fight,* and *win*... in air, space, and cyberspace." We must do out part through managing end strength efficiently to maximize capability; recruiting and retaining the highest quality and diverse Airmen; maximizing the Continuum of Learning throughout the Airman life cycle; continuing to focus on Quality of Life programs for Airmen and their families; and continuing to recognize the serious threat that suicide represents to our Airmen and its tragic consequences for Airmen, their families, and our Air Force community.

The Air Force provides unique options to our Nation's Joint Force commanders. The Air Force must safeguard our ability to: see anything on the face of the earth; range it; observe or hold it at risk; supply, rescue, support or destroy it; assess the effects; and exercise global command and control of all these activities. Our Airmen make this happen. Rising to the 21st Century challenge is not a choice--it is our responsibility!

We appreciate the work of this Subcommittee and Congress' support to the men and women of our Air Force and we look forward to your questions.

END-STRENGTH NUMBERS

Mr. ROTHMAN. Thank you, General.

I think, if one reads the biography of each of these distinguished gentlemen, they will be extremely impressed. It was noted that the secretary flew 800 missions, but I just thought I would mention that Lieutenant General Newton was a command pilot with over 2,900 flying hours in aircraft such as the B–2, B–1B, B–52 and T–38 as well.

But now you gentlemen have different responsibilities.

If you could, Secretary Duehring, explain what the end-strength number is that you project and the budget projects for the 2010 fiscal year and how you got there.

Mr. DUEHRING. Yes, sir, I will give you some history as to how we got there. A few years ago, I believe it was in 2005, when the previous secretary and chief of staff determined that the Air Force would reduce 40,000 people, and our new goal then was 316,600 people. We began ramping down at that time.

About this time last year January, February, the Army and then the Marine Corps announced that they were increasing their numbers. And of course, because we are tied so closely to what they do, we have to provide the air lift and a lot of other support, we reassessed what our bottom line should be. And our best guess at that point started building on some of the missions, cyber mission, cyber mission came back up; we had the incident with the nuclear weapons, of course, we needed to get our arms around again, just regular support for the Army and Marine Corps caused us to reevaluate exactly where we were.

They took this discussion to the Secretary of Defense, and in June of last year he said, okay, you are now pretty close to 330,000, and why don't you stop right in here? What happens when you have taken actions to decrease total end strength is, you can't turn it off overnight. It is sort of like an airplane in the descent; you have to pull back, and it is still going to go down a little ways, so we did. We are back up to about 329,000 plus change right now. It caused a little problem in that we needed to fund that, and we needed to find funding out of the existing budgets at that time, because we were planning on going down, and we had always spent those dollars.

The final answer to your question, Mr. Chairman, is really in the fiscal year 2010 Presidential budget, which will be coming out very shortly, but we are pretty close to where we will probably end up. I do want to make the point that we didn't add back people that we had planned on removing. We built up in these other areas because of new missions that we saw. So it as an adjustment like that.

Mr. ROTHMAN. In my opening remarks, I mentioned that there were activities that the Air Force was providing that were not part of its traditional mission. We spoke earlier, but I think, for the record, I would like to hear the numbers of Air Force personnel doing those nontraditional things and what those constitute.

NON-TRADITIONAL MISSION

Mr. DUEHRING. Yes. I have some of those at my fingertips. The average over the last 5 years of the numbers of Airmen who have been deployed for OIF-OEF tasking has been about 80,000 per year. Now we do a check, we checked it this morning again to make sure we had the latest information. About 38,000 deployed at any given time, and if you are talking about CENTCOM, of that number, 28,000 are in CENTCOM.

And you have to remember that we have a lot of commitments around the world in other areas as well. We have about 4,000 people who are involved in what we call Joint Expeditionary Tasking (JET). JET used to be called in-lieu-of tasking. In-lieu-of tasking doesn't really tell what we are doing. In-lieu-of tasking sounds like we are there for a moment and we are pulling back out. That is not the impression we want to give, because we are very much part of the joint team, the combined team, the allied team. And so we are going to stay as long as we have to.

Now, in addition, what people don't see is that we have a lot of folks who, in effect, fight from home station. The Army has to deploy if it is going to go fight a battle. The Marine Corps deploys. The Navy takes the fleet and goes over the horizon. The Air Force, in many, many, many cases, to the tune of about in 217,000 people, actually fight to one degree or another from their home station. Now this could be folks in the space business who are monitoring or keeping the satellites, the global-positioning satellites, in proper orbit. This could be the new Global Strike Command that we are setting up. This could be the cyber programs that we are setting up as well. And we discussed earlier some of the intelligence programs that, because of the capabilities we have now, allow us to bring information back here to be evaluated. It is just an increase in technology, which by the way is good for us, because we don't have to deploy more people. It is cheaper, plus they like sleeping in their own beds every night.

Mr. ROTHMAN. That includes operation of the UAVs from here.

Mr. DUEHRING. It does. We have a number of bases. That is going on as we speak.

Mr. ROTHMAN. Thank you.

General, did you want to respond to something.

General NEWTON. Sir, if I may, just quickly, again, as the secretary alluded to, our 217,000 Airmen as they are directly in line in support of providing capabilities to all 10 combatant commands, keep in mind that, again, as we are engaged, we are engaged across a spectrum from Operation Noble Eagle which began on the morning of September 11th, 2001, we have flown 54,000 Operation Noble Eagle missions since then; to providing capabilities to General Petraeus in the Central Command region, as we have highlighted as well; all the way to the high end with regard to providing strategic deterrence for this Nation.

So it is, again, as our Airmen, we are an expeditionary force, again, with the challenges that we face in the 21st century, we see ourselves not only fighting from in garrison or in place but also from a deployed location as well. So it spans again across a spectrum of capabilities but also conflicts for this Nation.

Mr. ROTHMAN. Thank you.

Congressman Frelinghuysen.

AIR FORCE NUCLEAR ENTERPRISE

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

One of the other hats I wore, I was ranking on Energy and Water, and I have a keen interest in the Air Force nuclear enterprise. In his report on the state of the military nuclear enterprise, former Secretary Jim Schlesinger said, "The decision that junior officers assigned initially to ICBMs will spend the remainder of their careers in the space mission area, and thus outside the broader Air Force, both devalue the mission area and have the effect of reducing the depth of Air Force nuclear experience, especially among mid-career and senior officers."

I would say, with apologies to General Newton, I think everybody who joins the Air Force wants to fly via a fighter pilot. What are we doing relative to changing the attitude that many felt has been somewhat current about getting into those parts of the nuclear and space enterprise which are very essential to our national security?

General NEWTON. Chairman, if I may, I am speaking as an experienced bomber pilot from our Strategic Air Command days, and also the son of a bomber pilot, as well. But our chief of staff and our secretary have put as a top priority reinvigorating the nuclear enterprise of the U.S. Air Force. As we discussed previously, when we had the unauthorized weapons transfer back in the summer of 2007, August 30th specifically, of 2007, if you recall from Minot to Barksdale and so forth—

Again, stemming from that instant back in August of 2007 that was, from my personal view, a significant wake up came from the United States Air Force. And as we refocused on a nuclear enterprise, and we have taken, not only from a commander-directed investigation but all the way through a Blue Ribbon Review that the Air Force undertook, through Dr. Schlesinger's report and so forth, we have come a long way. We still have a ways to go.

We are planning on setting up an Air Force Global Strike Command. We have already set up Air Force Global Strike Command Provisional. We plan on again bringing that command up to strength here soon. We have assigned both, the plan is to assign both B–52s and B–2 bombers, for instance, as well as intercontinental ballistic missile forces to that Global Strike Command. We are also taking a look at how we, not only from an equipment standpoint, but how we are organized and trained as well, but also how we develop our force. In your question, you alluded to the fact, I take license with your comment, that some of the experience and the capabilities in our airmen perhaps atrophied away.

Mr. FRELINGHUYSEN. Institutional memory is important.

General NEWTON. Yes, sir. As Secretary Schlesinger reported on, we are going to, again, take a lot of the insights that Secretary Schlesinger and the Commissioner provided us and put more emphasis and more focus on nuclear duties. For instance, an ICBM officer serving at Minot Air Force Base today will serve there perhaps in the capacity as a lieutenant and a captain, but can also, will continue to develop one's career across the nuclear enterprise,

where many of our men and women just like we have done in the past can serve in a variety of——

Mr. FRELINGHUYSEN. So how are you proceeding to attract and retain the people you have and, more importantly, get ready shall we say to incentivize those who would enter the Air Force to get into the nuclear enterprise? How are you identifying people that are highly capable who you want on your nuclear and space team?

General NEWTON. Part of that is a recruiting effort, but it is also how we assess, particularly within our officer ranks, also how we retain——

Mr. FRELINGHUYSEN. How are you doing it now? The wake-up call was delivered.

General NEWTON. It was. We are meeting most of the requirement with the nuclear enterprise. We are short in the bomber pilot and the bomber navigator force; that has been an issue to deal with not only within the nuclear enterprise but also across the rated community, particularly in the bomber and the navigator ranks and so forth. We are going to provide, again, many opportunities not only for them to serve but for them to also reach their full potential with a career in the United States Air Force, those who have come from the nuclear ranks.

Mr. FRELINGHUYSEN. So, as you go out there to attract and retain the people you need, where are you getting the money to do it?

General NEWTON. Yes, sir, with regard to recruiting and retention, we are large across the Air Force. We feel confident we will meet our recruiting goals as well as our retention goals certainly through fiscal year 2009. We feel that we have at this point the resources to do that as well as to provide the opportunities to get back to the nuclear issue and provide them the opportunity for not only duties in a nuclear enterprise but also for them to advance their careers.

Mr. FRELINGHUYSEN. So you turned the corner in terms of making sure that this part of the Air Force is indeed a career path and is of value?

General NEWTON. Yes, sir, it is. I go back to my initial comment by the Chief of Staff General Schwartz and our Secretary, Secretary Donley making this absolutely a top priority. Part of reinvigorating the nuclear enterprise is not necessarily just with equipment, but I think more focused on our Airmen and giving them the opportunity to reach their full potential in the nuclear enterprise. And that is where we believe we have indeed turned the corner, but we still have work do. I am confident that we will again provide for those opportunities and for the career development.

Mr. FRELINGHUYSEN. Let me just say, for the record, my chairman has come in, Chairman Visclosky, we are asking about the Air Force's role on the nuclear enterprise, and we have been assured that there has been a huge about-face here. And whatever the cultural roadblocks that were there have been removed, and indeed, you are making some considerable progress.

General NEWTON. Yes, sir, we are.

Mr. FRELINGHUYSEN. Thank you very much, Mr. Chairman.

Mr. ROTHMAN. Thank you.

Now Congressman Dicks, please.

OPERATION NOBLE EAGLE

Mr. DICKS. What is the status of Operation Noble Eagle? To date, how many combat air patrol missions supporting Operation Noble Eagle has the active Air Force flown?

Mr. DUEHRING. Sir, we have that information. There are quite a few numbers involved. If I could, I would like to just take it for the record and give it to you in a document, but I can tell you the status right now is that we still participate in Operation Noble Eagle. In fact, that is the oldest mission we have on the war on terrorism. I would like to highlight the Air Force's roles for those of us who were here on September 11th and remember that when the first aircraft approached the East Coast, the first response was by the United States Air Force. Specifically it was the Air National Guard. It was a unit from North Dakota, the Happy Hooligans, who happened to be flying out of Langley Air Force Base, Virginia at that time, were vectored and diverted from their mission toward the aircraft and then, after that, the tankers from Bangor, Maine, one on the runway and one getting ready to taxi out. We had the Air National Guard from D.C., followed by the Marine Corps Air Reserve flying F–18s out of Andrews Air Force Base, Maryland at that time. So that is our oldest mission. We continue to fly it. It has changed the number of Combat Air Patrols (CAPs), more people on alert rather than CAP, depending on the need at the time. I am happy to give you a better——

Mr. DICKS. Give us an update. That would be great.

We understand that the Air National Guard is not flying these patrols anymore, that they are just on alert status at a number of installations. Is that correct?

Mr. DUEHRING. The Air National Guard still has the primary role for the Air Sovereignty Mission, but the Air Sovereignty Alert status is what they are in when they are on the ground, and as soon as they raise off the ground and become Operation Noble Eagle, and I would say as requirements dictate and I am thinking in terms of political conventions, the inauguration, other events where we may want to have people a little closer to the action, those aircraft can easily be put into a CAP.

Mr. DICKS. I just was curious because our staff here says that the Air National Guard is not flying these patrols.

Mr. DUEHRING. When they wouldn't be——

Mr. DICKS. But is on alert status at a number of installations. So are you saying that, unless there is some reason, they are not doing these patrols?

Mr. DUEHRING. That is largely correct, yes, sir. Because you are using up the air frames, of course, and somebody has to decide, you know, when is the threat great enough to have people airborne? We can get them up there pretty darn fast. For example, the Air National Guard performed 481 ONE CAP sorties during 2007 and 304 during January through August of 2008 in addition to their ASA missions.

Mr. DICKS. You will give us an update on that?

Mr. DUEHRING. Yes, sir.

Mr. DICKS. The Navy has individual augmentees that are serving in Iraq. What about the Air Force?

Mr. DUEHRING. We do, too. It is a Reserve program. These are people who differ from your traditional drilling reservist in that they would not have a Reserve unit. With an intelligence unit, I belong to the 153rd Intelligence Squadron. My unit gets called up, and away I go. Individual Mobilization Augmentees are more assigned to a specific job against an active Duty billet with an active Air Force unit, wing, WIA Team or other headquarters position.

Mr. DICKS. How many Air Force augmentees are serving either in Iraq or Afghanistan?

Mr. DUEHRING. I would have to get that for you.

[The information follows:]

The Air Force Reserve has 138 Individual Mobilization Augmentees serving in Iraq and Afghanistan.

Mr. DICKS. The Navy number was like 12,000 down to 10,000.

General, do you have any idea?

General NEWTON. I believe you are referring to our Joint Expeditionary taskings. We provide capability in the U.S. Central Command (US CENTCOM) region, for instance, either by unit or by individuals. Right now, we have——

Mr. DICKS. But these were people who were actually serving in Iraq, they were volunteers. I know the Navy people call it, they were not part of—they would be part of a unit but——

General NEWTON. Like you said, individual augmentees. We task ours to do Joint Expeditionary taskings. We have approximately 3,500 of them serving under these Joint Expeditionary taskings.

Mr. DICKS. Is that affecting readiness in any way?

General NEWTON. Sir, it is not. Again, we have Airmen tasked to provide capabilities to the joint warfighter from, 120 days to 179 days to 365 days. But, again, part of what you alluded to in terms of these individual taskings.

Mr. DICKS. So you guys are going to reduce your overall personnel by what 20,000 or what I think the number was or 40,000.

Mr. DUEHRING. 40,000, yes sir.

Mr. DICKS. But now Secretary Gates has said, no, don't do that. So how will this affect your ability to go out and buy equipment? That was the reason you were going to reduce manpower.

Mr. DUEHRING. No. Well, what we did was, when we made the decision to reduce by 40,000, that took us back to 316,000, which was still our goal, but because of the new missions, including the nuclear mission which we had to reevaluate, the cyber works, some Special Operations requirements and, of course, associated maintenance, other programs that evolved because the Army is increasing their numbers and the Marine Corps is increasing their numbers, we have built up from that point. It looks like we are buying back, but that is not really what we are doing.

These are missions we didn't know about in 2005 when we made the decision to draw down. So the Secretary said, level off at about 330,000; you have my approval to do that, and let's reassess exactly what you need. We had to ask the Army and Marine Corps for their numbers. And where we are going to actually give you a finite amount will be in the President's budget for fiscal year 2010, which is coming very soon.

Mr. DICKS. Thank you, Mr. Chairman.

Mr. ROTHMAN. Thank you.

Congressman Tiahrt.

AIR NATIONAL GUARD

Mr. TIAHRT. Thank you, Mr. Chairman.

It is nice to see that the sun is shining in New Jersey with both the ranking member and the chairman here in control.

I wanted to talk a little bit about this National Guard thing because I think there has been some effort in the Air Force to sort of take the teeth away from the Guard. I know, at McConnell Air Force Base, our Air National Guard unit had done a lot of fighter training over the years. We eventually went to B–1s and we had the B–1 wing for a while, and it had the highest readiness rate and did an excellent job responding to everything that was thrown their way. And we had a great place for them. They only, even during midnight launches, only received one call from Derby, Kansas, which is right south of the base and that is the flight path. And it was a lady who wanted to know when you were going to quit launching the B–1s so she could let her dog out because she was worried that her dog might bark at the planes and disturb the neighbors. She wasn't worried about the B–1s, but she was worried about her dog barking.

I do think that there has been some shift to move the Guard to a more of a transport and tanker command rather than having them fly fighters, and I think they have a very important role in having teeth in the Guard. So I wanted to let you guys know, as part of the Air Force, that we think the Guard plays a very important role, and we are very proud of the job they do. And we ought to keep them active in flying jets and bombers.

PROCUREMENT SPECIALISTS

Now I want to talk about procurement as a career path. I know that General Shackleford now is somehow heading up procurement, and I am confident that he is competent, but are you familiar with the Gansler Commission from 2007? It was done by the Army, and it looked at sort of the procurement problems that they were facing, just to refresh your memory. If you haven't seen it, you ought to go look at it. It said basically that we ought to set up a career path within the services for procurement.

Now if you look outside the Defense industry and you look outside the Department of Defense, you will find that many companies have specialists that focus on this area. And it is a career path where they can specialize in buying other things. The Boeing Company, for example, they call it materiel. It is the people within Boeing responsible for getting supplies lined up and providing resources to that company. Other companies have different names for it.

But, basically, it is a career path where you have specialty, people who specialize in dealing with contractors and dealing with engineers and dealing with finance people, dealing with all those items necessary to bring services and hardware on line. But it seems like, within the services that we are having a hard time setting up that career path. We will have people come in for a couple of years and go out. It is part of the checking a box to get this overall career path satisfied. And it really doesn't give people an oppor-

tunity to focus on this very essential part of what Department of Defense does.

If you think about the billions of dollars that we spend every year and compare that to the private sector, and we really need some specialists. We have people who specialize in this, and they are buying a whole lot less dollar wise, and when it comes to national security, a whole lot less important. So here we have the Department of Defense and, in particular, the Air Force, where we are looking at the next-generation bomber; where we are going to replace the tankers with KC67s eventually, hopefully this year, and C–17s and kinds of these high dollar items, yet we don't have somebody who has this extensive knowledge in, how do you stabilize a design? How do you stabilize requirements? How do you stabilize the price? And I think what happens is, we get a user who comes in and takes over the top procurement, and he has his own views of what would be nice add-ons to a product, and we never hold a baseline. And the result is that we have a longer development and procurement and development process. It becomes less and less popular, and then we start cancelling product. Like the F–22, at some point in the past, we should have drawn a baseline and said, this is what the plane is going to look like; we will build it; and then at the first PDM, we will add on these things. My point is, I think a specialist would save money. I think they would save us schedule, and these very important hardware items would come on line and would do so in a timely fashion.

What consideration is the Air Force giving today to setting up a career path in procurement?

General NEWTON. Sir, if I may, your points are well taken.

Our Chief, General Schwartz, and our Secretary, Secretary Donley have set forth a number of priorities, from reinvigorating the nuclear enterprise, as we previously discussed, to developing our men and women and their families, but also they have put a premium on acquisition excellence. And that is not only from a process standpoint, as you alluded to, from determining requirements all the way to delivery of the capability of the joint warfighter, but also making sure that we are properly organized, trained and developing our people. And therefore, I know, having had many conversations with General Schwartz, our Chief of Staff, about this is making sure as we return to an acquisition excellence effort within the United States Air Force, that the premium has to be put on how we develop our people. We give them the training, and we give them the education, but we also need to give them the career development that would not just be a touch-and-go opportunity within the acquisition community. We have to put a premium on their service, not only from building experience but also building relationships across the entire DoD enterprise.

I have not read the Gansler Report but am least being familiar with it, and I know one of the tenants was that relationship, in terms of that acquisition excellence across not only Service but the DoD, is absolutely critical. And so that is where we are placing a premium and significant amount of importance to a new tanker and new capabilities within a new designed bomber and so forth.

Sir, may I retack on the teeth part of your comment, if I may?

Mr. TIAHRT. Yes.

General NEWTON. Again, this is a total force capability we have in the United States Air Force, regardless of whether it is from a fighter platform, a space platform, or from a bomber or a tanker. But if I may, I think one thing that really makes us a world class premium United States Air Force across any air force in the world, it is our tanker capability. It is our ability to put people, equipment and, quite candidly, bombs on target is not necessarily just from a shooter perspective but from a tanker capability as well. And the men and women who serve the total force, particularly in the Guard, do that every day, and they do it wonderfully.

Mr. TIAHRT. Well said.

Thank you, Mr. Chairman.

Mr. ROTHMAN. Thank you.

Mr. Visclosky.

Mr. VISCLOSKY. I would associate my words with Mr. Tiahrt and pay respect to the State of New Jersey.

Mr. ROTHMAN. Bless you.

Mr. DICKS. May I have one second? I understand that 43 percent of the acquisition spots in the Air Force are vacant; is that correct?

General NEWTON. Sir, let me take that one for the record.

AIR FORCE ACQUISITION

Mr. DICKS. It is a big number, and I think Congress is responsible. The former chairman of the Armed Services Committee, who no longer serves, he used to call the acquisition people "shoppers" in a very derogatory attention to it. Now we don't have enough people to do these programs, and we have the kind of scandalous result that occurred on the tankers, which is, in my judgment, was a, with eight different grounds of reversal by the GAO and many generals outside of the Air Force retired were shocked to see this happen. And so something is wrong with Air Force acquisition. If it is a lack of personnel or whatever, we have got to got this straightened out.

Thank you, Mr. Chairman.

Mr. ROTHMAN. Surely. I just want to exercise the rare privilege of me being the Chair. Do you acknowledge and accept the notion that the failure in the tanker situation was as a result of insufficient acquisition personnel?

General NEWTON. Mr. Chairman, rather than alluding to that particular tanker issue, what I do acknowledge is the absolute necessity that we provide the opportunities for men and women to serve in the acquisition career field, that we nurture their development and that we give them the opportunity to reach their full potential in the acquisition community.

Mr. ROTHMAN. I understand that. But is there a deficiency in that area now?

General NEWTON. Sir, I believe we can improve that area. I believe that we, as part of the top priorities that the Chief of Staff has as to how we go about ensuring that we provide acquisition excellence within the United States Air Force, that it starts with our people. And again, we give them every opportunity. It is the due diligence, just like was referred to in the previous comments with regard to the nuclear enterprise, the same level of effort or a similar level of effort needs to be provided to our professionals.

Mr. ROTHMAN. Thank you.
Mr. Moran.

CONTRACT SERVICES

Mr. MORAN. Thank you, Mr. Rothman.

The National Defense Authorization Act last year required each of the services to come up with a full inventory of all of the contracted services, the number of contractors, the number of contracts, et cetera. The Army did that, and obviously, the Army had the biggest task ahead of them. It is the largest of the services that we know, but the Air Force hasn't. Why would you not have complied with that authorization requirement to come up with the full inventory to have contract services?

Mr. DUEHRING. I am sorry, sir, I honestly don't know why they didn't.

Mr. MORAN. Well, it is a concern of this Committee, and it is something that the Appropriations Committee wanted as well as the authorizing committee. We found out that much of the combat effort, at least the support of the combat effort, was contracted out. And we had as many contractors over in Iraq as we had military and civilian personal.

Do you consider the contract workforce part of the total Air Force workforce?

General NEWTON. Sir, if I may ask, I think I understand what you are asking, are you talking about the——

Mr. MORAN. The number of people contracted who are not Air Force civilian or military personnel.

General NEWTON. This is a reduction of reliance on contractors and now part of the civilian workforce. If I may provide, I will take the question for the record in terms of providing specific numbers, but I do believe that we are, based on the NDAA specific, abiding by that, and we have reduced our contractors by approximately 500. And we are starting to see some savings in terms of how we are actually increasing because of the reduction in civilian contracts. We are seeing an increase in our civilian workforce to nearly approximately 800 to 850 civilians. What I see is a growth through the out-years of increasing that number to perhaps 2,500 in terms of adding to our civilian workforce.

Let me, please, if I may, provide specific numbers for you.

Mr. MORAN. Well, I don't doubt that you made some efforts in bringing back some of those inherently governmental jobs that have been contracted out, but the committee wanted to know what the inventory is. How many contractors do you have? How many contracts? And we haven't gotten that. And we need that to make our decision with regard to the proper allocation and the like. The Army did it. As I say, we haven't gotten that information from the Air Force, and it raises red flags. If you don't know how many contractors or contracts, that is a problem in and of itself.

General NEWTON. Sir, I am not prepared to answer that now, but I will certainly take the question for the record and get back with you.

EXPAND TRADITIONAL AIR FORCE ROLE

Mr. MORAN. I notice that there is a new initiative within the Air Force to expand your traditional Air Force role. For example, some of the Air Force personnel are conducting ground combat operations, which was not a traditional Air Force role, but you have been doing that in Iraq and Afghanistan. Normally, when people are recruited, that is not what they are necessarily recruited for. And then there are other roles that most people would not have originally assumed were traditional Air Force missions and requirements. And it is a change, as has been mentioned, to the Air Force culture. What we wonder about is, how are they trained? Who does the training? Do you sort of contract out the training to the Army and Marine Corps for roles that traditionally had been performed by them? How do you go about doing this?

Mr. DUEHRING. For those who come into basic training, last year we increased our time in basic training by 2 weeks, from 6 and a half to 8 and a half weeks. This was to introduce combat skills training. I think the first graduate came out last fall in the October time frame. That still is not going to prepare them for the roles. They will go from there to the skills training, and they still get combat skills training throughout this time, but once they get to their base, and they get into the AEF rotation. Or if they are in one of the career fields that goes more often than that, quite frankly, for longer periods, like civil engineers, the vehicle operations who very often go out in the convoys with the Army, we will send them, yes, to schools.

We started initially, as I recall, about 2004 when the Army first said it could use a little help in some of these areas, and vehicle operations I remember very clearly because the first group who went over there wasn't prepared very well. They were pretty good drivers and could fix the trucks. We took them into Kuwait, and I was in DoD at that time; I wasn't in the Air Force. But I watched what happened. They got their top-off training there. We don't do that anymore. Well, there is still training there, of course, but we have schools back here, whether it is in New Jersey at Fort Dix; we have a lot of folks come through Fort Dix.

Mr. FRELINGHUYSEN. Good.

Mr. DUEHRING. More coming I am sure. We have also some places in Texas that we have been going to, near San Antonio. I have been to Fort Hood and seen some of the work there. I have seen Air Force people at Fort Bragg, but now, to the degree that we can, we are trying to do some of that training ourselves, realizing that, because the threats change, the types of improvised explosive devices (IEDs) that they might encounter, the attacks, however they are doing it this week, can change, they still will get some top-off training even as they go into country.

So it is a joint program. Some of it is ours, and some is the Army's. I go on the road every month. I visit two to five bases a month; I say, do you feel trained, or do you feel comfortable in what you are doing? I always hit the forces. I always hit Explosive Ordnance Disposal (EOD). I always hit the vehicle operations guys, and I say, how comfortable are you? I am getting very positive responses, and that was not true back in 2004.

Mr. ROTHMAN. Mr. Kingston.

Mr. MORAN. Well, thank you.

Mr. Chair, let me underscore the fact that we want this information. We are asking for it from all the services: What is the extent of the contracting out? Where is it? What roles are contracting? We want to know the total number of contract personnel, number of contracts, that kind of thing. We are trying to get our hands around what is the real total workforce here, how it is being distributed, who is fighting the wars, et cetera. Thank you.

Mr. ROTHMAN. Thank the gentleman.

Mr. Kingston.

PHYSICAL FITNESS

Mr. KINGSTON. I want to follow-up on Mr. Moran's questions in terms of the physical fitness. We had a hearing last week with the Army about the amount of equipment a soldier carries, which can weigh up to 93 pounds. Are you having the same problem with particularly against your security forces because they would be the ones carrying the most on the ground, right?

General NEWTON. Yes, sir, we are very much committed to a fit-to-fight total force, specifically within the security forces community. Again, nothing has come to my attention in terms of any type of inadequacy in terms of physical fitness amongst our security forces.

However, I can tell you I have been to the schoolhouse down at Lackland Air Force Base outside of San Antonio, Texas, and I can tell you, it is a very fit training regimen. It goes also back to emphasis with regard to fit-to-fight starting in basic military training. But our airmen are, as we focus not only on their fitness but in terms of their health and wellness as well, but again, to go back more to your point, nothing that I had knowledge of relates to what you just described the Army may be having.

Mr. KINGSTON. Well, what my question is, do you know how much their equipment weighs? And for the infantry soldier in the Army, it was about 93 pounds.

General NEWTON. Yes, I recall seeing that information for the Army. I will have to get back to you in terms of specifically.

Mr. KINGSTON. You probably don't have the same problem because, otherwise, you would probably have been asked this several times, I would imagine.

General NEWTON. Yes, sir, but I can, not only within our security forces, but we also have a number of Airmen who are assigned to providing capabilities to Army or ground units engaged, for instance, our tactical air control party and so forth, because they are tasked to carry the same capabilities with them as they deploy with their counterparts, even within the ground forces or Special Operations Forces.

Mr. KINGSTON. Well, if they are at Lackland training, then the altitude is going to be a lot different in Afghanistan. And I wonder if you have problems with altitude sickness, or is that something that takes about a week to get adjusted to, and then for the guys on the ground, they are okay with it?

General NEWTON. Yes, sir. That is part of any unit that is being deployed, particularly from a garrison force that, as you alluded to,

is not at altitude; it takes a period of time for them to be acclimated to the theater or the local operation that they happen to be engaged with.

If I may also say when you deploy to places like Afghanistan or any other place around the world, as we find our Airmen deployed globally, it does take some time to get acclimated. Also there can be varying degrees of training that you can start in garrison to be deployed in.

Mr. KINGSTON. What do you do for that? Is it mostly the key time on the ground before they really go out in full engagement, so that their bodies can get use to it? Or do you take a pill or drink lots of liquid? How do we get a guy jumping out of a plane to hit the ground running?

General NEWTON. Yes, sir, we have a commander's program, particularly when they deploy to a variety of, in many cases, austere locations to get their Airmen fit. I do not have a specific regimen for you. It is not only your physical activity, but one must ensure you are not dehydrated, having flown long durations, sorties for instance and so forth. It is a type of diet that allows you to be fully engaged.

And the last point I would make is that it is not necessarily the training, but it is also the duration of mission that they are tasked to do, extended hours and so forth, so there was a lot of physical regimen involved.

Mr. KINGSTON. Another question. Some Army Non-Commissioned Officers (NCOs) had said that some of the new recruits are able unable to pass the physical readiness test. Is the Air Force finding that to be true?

Mr. Secretary, you are shaking your head.

Mr. DUEHRING. That is true, because I think the number that we hear very often is, only 27 percent of the high school graduates are actually eligible, qualified to join the military. And that includes, of course, not only physical fitness, but lifestyle decisions and things like this. But this is something that is in the papers a lot. We get feedback from the recruiters that kids just aren't as tough as they once were.

Another problem, doesn't affect us too much, but it does affect the SEALs, and I have some friends in that business, is the kids coming in don't know how to swim, because we don't take our kids off to a Red Cross beginners course like they did when we were kids. It is a real challenge, and we have to work with them.

Mr. KINGSTON. How about kids on Ritalin, is that a problem?

Mr. DUEHRING. I have heard something about this. I would like to take that back before I misspeak, because it has been quite some time since I have heard that discussed. But I don't think you can come in—I am thinking now that you can't come in if you are on Ritalin, of course, as an 18-year-old or 19-year-old.

Mr. KINGSTON. I don't think you can.

Mr. Chairman, this is my last question, if I could finish it.

From time to time, we get calls from kids who want to join the services, but they are unable to because they are on Ritalin. It is a widespread use, as you know, particularly I think in private schools where the parents are saying, oh my kid is not going to get in med school because he is in 6th grade right now and doesn't

have a 3.5 average, and so they panic and put them on Ritalin. What happens to them is, they play football and soccer; they have a full high school experience, full college experience. And then one day they want to get into the military, and they find out that if you have been taking Ritalin, it is considered a disability, and it is a shock to them. And I was just wondering. So if you can go back and look at that.

Mr. DUEHRING. I would like to get a medical opinion on that. We are happy to provide that for you, sir.

Mr. KINGSTON. Thank you.

Thank you, Mr. Chairman.

Mr. ROTHMAN. Ms. Kaptur.

DEPLOYMENT AND PSYCHOLOGICAL HEALTH

Ms. KAPTUR. Thank you, Mr. Chairman.

I apologize for being late. I had a conflict this morning and will have to leave shortly after the questioning to go back to the other committee as well.

Thank you for your service, and I want to focus my questions on the psychological health of warriors. I wanted to just ask, General, whether you would consider F–16 units that are based at Guard bases under your command?

General NEWTON. I am sorry, would you rephrase that question? I am sorry.

Ms. KAPTUR. Yes, I am just curious as to whether war-ready units that are under the auspices of the Guard in a given State like Ohio, F–16 units that are under Army Air, and whether you consider them under your command because they are war-ready units.

General NEWTON. Yes, ma'am. In the United States Air Force, it is a total force perspective, regardless of units, our Airmen, for that matter, serve in a capacity of inactive duty or Guard or Reserve. And so we very much approach how we organize training equipped from a total force perspective. So, yes, we would consider them a part of the total force Air Force. However, Air National Guard units fall under active Air Force command when they are activated to title 10 Status. Otherwise, ANG units remain under their respective State governor's control.

Ms. KAPTUR. I thank you very much for that, because I am interested in the portions of your testimony. I am interested in it all, but the part dealing with deployment and psychological health.

We in Ohio, over several cycles now, have been attempting to work with the Guard there, Army and Army Air, including our F–16 units, but many other units around the State, to test the returning veterans through the Guard.

Is it difficult in Ohio because we have so may Guard and Reserve based units, plus we have Wright Pat for active duty, and we have many soldiers returning home and Airmen returning home where there is no base. And we have a very extensive psychological testing program that we are undertaking.

One of the issues we have confronted, and I would like to give you a piece of paper on this, and we are working with several universities, Case Western University, Western Reserve University, University of Toledo Medical University, University of Michigan. So it is a region-wide consortium that are trying to embrace these

returning vets and to follow them through their life to see when PTSD might onset and so forth. Of all of services, the Air Force is the least prevalent. I mean, Army and Marines are much more than Air Force in general. But one of the difficulties we have had with the Ohio Guard, and we are not sure what level this decision is being made, we wanted voluntary genetic testing. We want to create a DNA profile of susceptibility to these illnesses.

Ms. KAPTUR. And at some level they are saying, well, you know, we cannot do this. And we cannot figure out whether it is at the national level, whether it is the Guard bureau, whether it is some commander at some level that we do not know, somebody at DoD.

I am wondering if you could help us with that, because we really want to—we know all medical conditions have genetic markers, whether it is Alzheimer's, whether it is PTSD; and the goal is to create the largest epidemiological profile ever done, with over 3,000 returning soldiers and airmen who voluntarily agree to be tested.

Then there is a real, you know, sophisticated sampling technique that they use and so forth. But this has proven to be a bit of a stumbling block. And I would just like to have the right person contact me because it is nettlesome.

I told these people, I said before, when we get started on this I want a Nobel prize out of you; I do not want anything less. We are going to understand this and we are going to treat it. We are going to identify it and we are going to treat it, and we have got to have this.

So I would like to know if you could help us with that, work with our Guard bureau, work with whoever at DoD is responsible for this. And let's get a really excellent research profile that will yield the results that we need.

Mr. BISHOP. Would the gentlelady yield?

Ms. KAPTUR. I would be pleased to yield to the gentleman.

Mr. BISHOP. Thank you.

In that regard, I would like to remind the gentlelady—there was at some point some research being done by the Army with regard to PTSD and some genetic markers and some DNA that would be predictable. And at some point there was some controversy about the study because there was a need for high recruitment, and they were afraid, some say, that these genetic markers would prevent their reaching the recruitment goals because it would predict who was likely to be susceptible to PTSD, which was a very interesting thing, and the study was stopped for some other supposedly unrelated reasons.

We touched on that last year in Committee.

Ms. KAPTUR. I thank you. Well, maybe we are running into the same speed bump here. I do not know. But it is a very important speed bump. And I would like to have a discussion with whoever is involved in the decision-making chain. General Wayt, the Ohio Guard commander, is very involved in these issues, but I am not sure that this is not above his pay grade.

General NEWTON. If I may, your points are well taken, and certainly I will take that back. But we in the United States Air Force—regardless, active duty, Guard, Reserve, civilian, family members and so forth—are very much concerned and/or focused on the health and wellness of our airmen and their families. And in

a high operations tempo environment, we are seeing stresses that again are imparted by either duty deployed in such places as Iraq or Afghanistan or 135 other locations around the world where we find Airmen serving, as well as stresses that we have back home in garrison at our bases as well.

So I take your point, and again—the focus is on the health and wellness of the men and women who serve, as well as their family members. It is absolutely essential that we not be in a reactive mode, but we get ahead of this and we focus on it as well.

Ms. KAPTUR. I thank you, General, and I look forward to hearing from you.

Mr. ROTHMAN. Ms. Granger.

DEPLOYMENTS

Ms. GRANGER. Thank you. We have heard from the Army that their deployments are down to 1 year—they were at 15 months—and the Marines Corps is at 7 months. And my question to you is, going back to what Mr. Moran said about combat roles and an increase in difference in your role, will this change the deployment time? And how will it affect it?

Mr. DUEHRING. Let me give us a little background on how we got to where we are and what I think is going to happen in the future. The Air Force had a continuing commitment starting before 9/11. I remember working for OSD at the time, watching, you know, all the Services. And because the Services were all being committed, the Air Force obviously had to play its role. And the Guard and Reserve, for example, going back to pre-first Gulf War, maybe fewer than a million man-days a year on active duty. And by the time we got up to around the end of the century, shall we say, it was 13.1 million man-days a year, so you could see that this workload was increasing.

What the Air Force did was establish the AEF rotation policy, the Aerospace Expeditionary Force rotation policy. Very simply, it put all of the forces, with the exception of a few that we kept in reserve, into groups, of which there were—well, actually five basic groups that went for three months at a time, and they just kept rotating. And what this meant was that if you, as a member of the first group, went for three months—first of all, you were going to know well in advance when you were going and you knew when you were coming back—very good for the Guard and Reserve right away, because they could tell their employers as well.

And you knew that when your turn came, it would not be on Christmas again. If you had missed Christmas or missed somebody's birthday, you were going to be pushed three months down the road.

Well, this served us well. We then pushed it to—that was not quite long enough to be in theater. So we voluntarily moved it to 120 days, 4 months, and it just—the cycle just got a little bit bigger and longer. I remember when General Blum, who had recently taken over as the chief of the National Guard Bureau, came up with—he called it the hurricane charts, which is how he wanted to move the Army National Guard; and it was the same type of idea, to give predictability. This idea now has really spread throughout all of the Department.

The Army, of course, likes—they move large units. They like to have them on the ground for a year. So that meant, whatever action has to go ahead of time and then there is some action on the back side, that is, in addition to it.

And then they moved up to 15 months, because as you may recall, the threat—it peaked about a year or two ago, and we started keeping people longer and longer and longer, okay?

The Air Force tried tenaciously to stick to its AEF rotation cycle, but we found in certain career fields we could not do it. And remember, I talked about vehicle ops; those guys went and they drove with the Army. We talked about EOD, and still, to this day, our EOD people are embedded in Army units. You go out there you will see them; in fact, sometimes they wear Army uniforms. There is a whole laundry list of ones that we have talked about, these joint expeditionary taskings.

These folks, the Army wanted to keep for a year. We honestly do not think that is a good idea. We find that the stress after about eight, nine months—by the way, you noticed the Marines stayed at seven months. They have always stayed at seven; they believe in that.

But we found if we stayed longer, the stress starts going up dramatically and all these other issues take place. If we can get them back after six months, let them calm down, let them get back with their families and adjust, we can call them up again. They will be ready to go again.

So what we did is, we took the 12-month rotation that the Army wanted and divided it in half and said, Mr. Army, would you accept that? And they have, by and large, accepted that. There are some exceptions to it. Usually people volunteer if they want to stay longer than that, okay?

So we knew that civil engineering, we knew EOD, we knew that some of the medical people, intelligence, stress career fields were going six months, and this messed up our AEF rotation cycle. So we said, okay, let's identify those people and say they are going to go for six months. And what that did was, it allowed us to clearly identify who was stressed, which career fields we just did not have the right number of people in for this new mission.

And the other thing it gave our people was predictability. And we said, okay, we admit you are going for six months now, 179 days, whatever the case may be. And at least, you know, next August you will probably go again. And that helped tremendously.

To answer your question, long answer to a short question is, about 52 percent of our deployments now, by counting people, is six months or greater. As long as we are in the program, the Joint Expeditionary Force, we are going to have units that are going to be committed at six-month intervals.

We would still like to stay with the AEF rotation cycle, and the greatest pressure comes from the Guard and the Reserve. Example: If you are an airline pilot and you are flying F–16s in Ohio, wherever the case may be, and you go downrange and you are flying a 767 back home, you are going to run out of currency in 90 days. And it is extremely expensive for the airline to requalify you in that airplane. So what we have worked out with the airline industry is, if you take them for six months—I am sorry, I am sorry—

two months, 60 days, bring them back, get a few flights in the 767, you can have them back again because you have just reset the clock.

So in cases like this where it works to our advantage, we would like to stay with the AEF rotation cycle. But we recognize in probably a dozen career fields it is just not possible. But at least our folks know what is happening when.

Mr. ROTHMAN. Mr. Bishop.

SUICIDE PREVENTION

Mr. BISHOP. Thank you very much. And again welcome, gentlemen. And I appreciate it very much, the enlightenment you have shared with us.

With regard to the increased stress level that I heard you discussing, the last suicide prevention study by the Air Force was done in 2005. And you have talked about the additional missions and the impact that has had on your personnel.

Do you think that it is time now to upgrade that, considering the fact that the Army and the Marine Corps, because of their missions, have experienced a tremendous challenge with regard to suicide- and PTSD-related to the extended deployments and the new missions? That is the first question.

The second question relates to the high operational tempo, which has put a real strain on your personnel accounts, causing the funding to run out before the end of the fiscal year. Talking about the 2009 fiscal year execution, can you tell me what the monthly burnout rate for your personnel costs are and when, in this fiscal year, you expect that your personnel accounts will run out of money?

Three quick questions.

Mr. DUEHRING. Let me start with the second one because it is the easiest one to answer.

The monthly burnout rate is 2.2 billion. And the going broke date right now we estimate is around 12 September; and we are hoping that the supplement will pick up in there.

The suicide issue, I will give you the simple answer first, which is, we can give you whatever you would like on suicides any time. We do review it in house. We do a review of the suicide rates at the Air Force level, the major command level, and the wing level; for those more oriented towards the Army, think of it as a base level.

We have what we call a Community Action Information Board—I think it is at each one that reviews this—twice a year. And, of course, commanders, we at our level see it a lot more frequently than that. We get a summary every week, and if there is an incident——

Mr. BISHOP. Do you see any trends?

Mr. DUEHRING. Trends, we have—I have got a couple of figures here.

Mr. BISHOP. That you can relate particularly to the op tempo?

Mr. DUEHRING. We are kind of holding our own.

Let's see, pre-1996, in our comments we talked—in my comments I talked about the new holistic program that we had adopted in 1996. And our rate prior to that was 13.5 percent, and since then it has been 9.8 percent, although it is——

Mr. BISHOP. That is the suicide rate?

Mr. DUEHRING. Yes, sir.

Mr. BISHOP. Thirteen percent?

Mr. DUEHRING. Yeah, we are below the national average. Yes, 13.5, I am sorry, 13.5 based on 100,000.

Mr. BISHOP. Oh, okay.

Mr. DUEHRING. I got talking. I got so wrapped up in it, I am sorry, sir; 13.5 per 100,000?

Mr. BISHOP. Out of 100,000?

Mr. DUEHRING. Yes, sir. And then, after that, 9.8.

Mr. BISHOP. And you attribute that to your 1996 program?

Mr. DUEHRING. Yes.

Mr. BISHOP. But you have not really been keeping up with it since 2005?

Mr. DUEHRING. No, we do. Within the organization we have. There has not been a request from Congress to provide that information. We can certainly give it to you any time that you would like to have it.

Mr. BISHOP. I think it would be very helpful to us, because we have got the information from the Army and the Marine Corps, and with the increased tempo of the Air Force, particularly as you describe the high stress level, we probably need to know that also. Because there might be something we may need to look into with regard to what is happening with your Air Force personnel——

Mr. DUEHRING. Yes, sir.

Mr. BISHOP [continuing]. And their families.

General NEWTON. Sir, may I add just a brief comment?

From a commander standpoint or previous commander standpoint, one suicide is one too many, and we are always striving to prevent the next. And so what we have in place through the years is a very focused, engaged commanders program at the unit level or at the base level all the way up to our Chief of Staff and our Secretary of the Air Force as well.

And so, we are constantly engaged. We are not only engaged within the United States Air Force, but are looking for successes perhaps in other programs that the United States Army, United States Marine Corps, and United States Navy have engaged with as well.

So it is not just the Air Force, isolated. In fact, I have engaged with Lieutenant General Mike Rochelle, who is the Chief of Personnel for the Army on the Army suicide program and what they are doing. So it is a matter of us also integrating and understanding what other Services are going through.

Mr. BISHOP. So is that because you have seen some trends and you expect that that might increase and so you are trying to anticipate it?

General NEWTON. Yes, sir. We are obviously—as the Secretary referred to, it still remains a very high operations tempo environment. We do not want to put ourselves in a reactive mode; we want to be proactive.

And to go back to my first point, one suicide is one too many, and we are always striving to prevent the next one as well.

Mr. BISHOP. Just one follow-up with respect to the search and rescue missions of the Air Force, I know at Moody Air Force Base

in Georgia there was a period, particularly at the beginning of the Iraq war, where they had been called upon pretty heavily; and of course, that was a lot of stress there among families and there were some suicide attempts there. And, of course, there was a lot of family disruption and family violence on return, and divorces.

That seemed to have been at the beginning, and I don't know how it has developed since 2001–2002. But I certainly would like to have that information.

General NEWTON. Yes, sir, I'd be delighted to provide you with that information. We could spend a lot of time talking about some of the preventive measures and programs we have engaged.

[The information follows:]

During 2001 and 2002 the rate of substantiated child maltreatment at Moody AFB, GA was significantly higher than the Air Force average rate (FY01: 14.72 vs. 7.35 per 1,000; FY02: 15.25 vs. 7.32 per 1,000). Substantiated spouse maltreatment was elevated in 2001 (19.15 vs. 16.12 per 1,000). From 2002 to 2008 the child and adult maltreatment rates dropped to a rate at or below the Air Force average. Variation between Family Advocacy Officers (FAO's) substantiation rates was a concern in family advocacy at all bases. In 2004, the Central Registry Board was implemented and helped reduce variation in the substantiation rates among different bases. The Central Registry Board implementation accounts for part of the decrease in the substantiation rates during 2002–2008. Additionally, FAO's and their staff received robust training to address their basic processes, to include variation of substantiation rates. This training improved the quality of the FAO's, their staff, and the overall program capabilities.

From January 1, 2000 to December 31, 2008 there were three completed suicides at Moody AFB, GA. The deaths occurred in 2001, 2006, and the last in 2007.

Mr. ROTHMAN. Ms. Kilpatrick.

FAMILIES OF SERVICEMEMBERS

Ms. KILPATRICK. Thank you, Mr. Chairman.

General, Secretary, thank you. Good morning. Thank you for your service. It has been very interesting, the discussion here.

And I notice from what I read, health care, health professionals within the Air Force, is down from where you would like it to be. You have several incentive programs, including scholarships and the like, to help get that number up. In light of the last discussions we have had in this room this morning talking about health care, but I think I want focus on the children of service people, because I think there might be some relationship between being in theater, and I think Ms. Granger talked about the time between that in their tours, as well as when they come home, and suicide. Somewhere is some correlation.

And whatever reports you would provide, I would like to see some of that if there is some correlation on that, health care in the services and your need for—what you have for the enlisted as well as for the families. How adequate is it? How short are we? What needs to be done? And children particularly.

In my own district, children of service people who come home between deployments, not long enough because it is probably never long enough when you are fighting two wars, the children seem to suffer mental stress.

General NEWTON. Yes, ma'am.

If I may add, I am the son of an Air Force officer, and recall, when my dad was in Vietnam for a year and so forth, I candidly experienced some of the—certainly the separation between myself

and my father and saw the stresses that my mom had. Of course, that was a different era, different war, and so forth.

And being the father of two daughters we talk a lot about this in terms of the stresses that we see in our force.

I am very confident of the health care that the United States Air Force is providing to our members, as well as the family members. I certainly agree with you that the stresses that the members, particularly those serving in deployed locations, but also back home at bases, the stresses that they are undergoing, it does have an impact on our Air Force children, if I may call them that; and that we go into this knowing and understanding that a stressed force has impacts on family members as well.

And, therefore, we are striving to understand what those stresses are—we are not accepting the fact that they do not exist; they do—that we need to be proactive in dealing with family stresses as well. And so I would be delighted to provide you much more information on these programs.

Ms. KILPATRICK. And how we can help to make sure we meet those goals of health care professionals.

General NEWTON. Absolutely.

[The information follows:]

The Air Force supports Airmen and their families from the front line to the home front by offering proactive services and programs that assist in identifying and resolving concerns that bring about family stress, and to provide a variety of avenues to reduce stress.

At home station, information and referral services are offered directly to spouses and families, such as: pre-deployment briefings for members and families, free weekly morale calls to keep families connected and help reduce their sense of isolation, reintegration briefings for 22,000 spouses that prepared them for changes during the separation and to improve the quality of the reunion–22,000 reintegration briefings were conducted over the last year alone. The Air Force also offers communication/life skills development workshops, free oil changes funded by Air Force Aid Society for each deployed family, and financial counseling at home station and at deployed locations. The Airman Readiness Center at Al Udeid provided over 8,000 consultations on topics that covered financial readiness, reintegration, and reunion with families and workplaces. Over the last year, the Air Force also provided employment and career education assistance for 40,000 spouses to prepare for portable careers.

The Air Force offers many other programs to help our Airmen and their families through stressful periods. For instance, the Extended Duty Child Care program provides 16,000 hours of free child care each month, and is designed to assist Airmen who have to work longer hours, evenings, overnight, and weekends. The Give Parents a Break program provides parents with a few hours break each month from the stresses of parenting—and the Air Force partners with the Air Force Aid Society to provide free child care to parents who are subject to unique stressors due to the nature of military life such as deployments, remote tours of duty, and extended hours. The Air Force Aid Society provides invaluable support to our Airmen and families, and funds 5,000 hours of respite child care annually. Department of Defense funded Military and Family Life Consultants are also available at all Air Force locations to provide non-medical counseling to Airmen and their families and help resolve some of the stressors associated with the military lifestyle.

Also, Air Force Youth Programs partner with the National Military Family Association Operation Purple Camps to provide 7–10 free, week-long camps to help military kids experience fun while learning coping skills to deal with war-related stress. Children of deployed members receive priority to participate in the Youth Camping Program, which offers residential and specialty camp opportunities and experiences for more than 20,000 youth annually. This year, the Air Force Reserve Command hosted a Deployment Camp for children of Air National Guard and Air Force Reserve Airmen.

Additionally, the Air Force has made great efforts to expand or create fitness programs and facilities that cater specifically to parents and families. It is hard to find a fitness center in the Air Force that does not have a family-oriented fitness room

that allows parents to workout with their children. At Ramstein Air Base in Germany, fitness professionals show their commitment to families by creating programs such as Mommy and Me, Yoga for Kids and Strollerobics. Through innovative approaches like these, family members have an avenue to reduce stress during spouse deployments as well as to help reduce the stresses of post-partum depression and weight gain.

Ms. KILPATRICK. Then my other question relates to, last session the Congressional Black Caucus met with the Joint Chiefs of Staff regarding flag officers and the lack thereof of minorities—all minorities, I might add. Has there been any report or anything out on how that is going, from one star up and how the pipeline is? Are there people being prepared for that? I mean, do we need to do something?

General NEWTON. Yes, ma'am. Again, under the leadership of our Secretary Donley and, particularly, General Schwartz, our Chief of Staff, we are making sure that we provide the opportunity for every Airman to reach his or her potential. The fact that our Nation——

Ms. KILPATRICK. We found last year that sometimes they transfer out before they—got to stay in the stream. Sometimes they transfer out.

General NEWTON. Yes, ma'am. It is not only an issue with regard to recruiting and accessions, but also retention. It is a matter of mentoring our men and women, who want to strive to meet their potential, that they have the opportunity to do that.

Our Nation is evolving in terms of, the talent that it has. As your Deputy Chief of Staff for Manpower and Personnel for the United States Air Force, there is a war for talent out there. Certainly General Schwartz feels that we need to go to every community that this Nation has to offer to be able to take the talent that every man and woman who is eligible to come into the United States Air Force—not just a recruiting effort, though.

Ms. KILPATRICK. It is retention and it is about those being in now. Because you have to start somewhere; we understand that.

General NEWTON. Yes, ma'am.

Ms. KILPATRICK. In the pipeline now, have we done anything over the last couple years? Is there any reporting where really the flag officers, one star and up, can——

General NEWTON. We have a number of general officers who are certainly African American and other demographics as well.

Again, I believe we need to diversify our capabilities and diversify our force, I believe that is a mission imperative, that is a national strategy imperative. It is the right thing to do, but it is about mission effectiveness.

I could probably provide you numbers off line if you would like to.

[The information follows:]

Current Air Force general officer demographics break down into six categories; women, black, Asian/Pacific Islander, Hispanic, American Indian and white. Based on the most recent numbers, our total general officer population is 299 of which we currently have 27 women (1 lieutenant general, 5 major generals and 21 brigadier generals), 13 African Americans (1 lieutenant general, 5 major generals and 7 brigadier generals), 3 Asian/Pacific Islanders (1 major general and 2 brigadier generals), 4 Hispanics (1 lieutenant general and 3 brigadier generals) and 1 American Indian serving as a brigadier general.

Ms. KILPATRICK. And I read about that 27 percent, and I think this is related to that. I think when you have flag officers who are of those very multiethnics, then you get a stronger force. Our retention and recruitment may be down, but all that plays into getting where we want to be, I believe.

General NEWTON. A couple weeks ago I attended the Black Engineer of the Year award in Baltimore, for instance. And you have got a number of youngsters in this case who are steeped in math, technology, engineering and sciences who come to Baltimore on an annual basis. I want to make sure that we have an opportunity to go—again, recruit across the entire U.S. population, but perhaps to communities that we have not focused on very effectively in the past.

Ms. KILPATRICK. Perhaps Members of Congress can be of assistance in that.

General NEWTON. I would be delighted to have that discussion. I know my Chief would as well.

Ms. KILPATRICK. Thank you.

General NEWTON. And also for your insights and support.

Ms. KILPATRICK. Appreciate that, General.

Thank you, Mr. Chairman.

Mr. ROTHMAN. Call on the ranking member, Mr. Frelinghuysen.

INTELLIGENCE, SURVEILLANCE AND RECONNAISSANCE

Mr. FRELINGHUYSEN. Thank you very much, Mr. Chairman.

General Newton, ISR—intelligence, surveillance, and reconnaissance—what are its manning requirements?

General NEWTON. Yes, sir, based on the requirement of the joint warfighter, particularly in the U.S. Central Command region, we have been tasked to provide an increase in intelligence, surveillance, and reconnaissance capabilities that are particularly borne out in our unmanned aerial vehicles program, the Reaper and the Predator. We have been tasked by the Department's leadership that we provide 50 combat air patrol capability.

Mr. FRELINGHUYSEN. The CAPs?

General NEWTON. CAPs, yes, sir.

Therefore, as we look to the proposed active duty end strength of 330,000, the number that we have discussed previously that we put as a priority towards that end strength, we also put a high priority to providing those ISR, particularly in the platform of——

Mr. FRELINGHUYSEN. You have put a high priority on it. Are you providing incentives, financial incentives?

General NEWTON. Yes, sir.

For instance, our men and women who fly or who operate the unmanned aerial vehicles out of Creech Air Force Base just outside of Las Vegas, they are our bomber pilots and fighter pilots and navigators and so forth, we provide them aircrew continuation pay or aircrew incentive pay.

Mr. FRELINGHUYSEN. So you are meeting that obligation?

General NEWTON. Sir, we are. There is a very high operations tempo environment at Creech Air Force Base, as you well know, because of the demand——

Mr. FRELINGHUYSEN. Some remarkable things are going on there.

General NEWTON. Yes, sir. And we are meeting the demands and capabilities of the joint warfighter, and see increased demands on the horizon.

Mr. FRELINGHUYSEN. There are some jobs that are, should we say "down and dirty," some pretty tough areas, which if you look at recruiting and retention, EOD, explosives, combat air controllers, pararescue of securities, how are we doing in those areas?

This sort of gets back to our previous discussion here. A lot of people sign up for things and then, you know, these are part of your overall mission. How are we doing in those types of areas?

I remember at, I think, Offutt Air Force Base you had a pretty good linguists school. You know, how are we doing in those areas—EOD, rescue, combat air controllers?

Mr. DUEHRING. Some of those, of course, have an increase in the requirements, which is a challenge in that, as soon as the requirement comes down and we have to fill it—and you cannot just fill it overnight. So we use the bonus authority that we have been given, very often to encourage people to come into those career fields.

Now, EOD has some problems in the middle level. We would try to retain those people. We would emphasize retaining those folks because of the stress.

Mr. FRELINGHUYSEN. You retain them with bonuses and other——

Mr. DUEHRING. We do. Yes, sir.

Mr. FRELINGHUYSEN. And there has been some level of success in that area?

Mr. DUEHRING. There has.

Also we are trying to reduce the stress; you know, we look—are there other people who can do the job? We work with the other Services in trying to space out the deployments, actively—very, very actively looking at who is available to do what.

In the ISR program last fall we felt we were getting pretty thin in the number of people that we had available to actually fly these CAPs day in and day out. And what we did is, we looked at each of the bases. In this case, North Dakota found that they had a couple extra folks who were not that heavily tasked, and we moved them in temporarily, or we gave the CPA to another base to do it.

It is a lot of creative work to try to take the stress off as well as put people in from the bottom.

Talking ISR, we are looking at some Navy assets, people who—you know, the Navy is closing down a lot of their P–3 operations, and certainly on the Reserve side of the house, the FA–18s are going away, others. We have got pilots there: We would love to have you; we have got this great job if you would like to come over.

So we look everywhere we can to try to take the pressure off, as well as to build the force up from the bottom.

RECRUITING AND RETAINING

Mr. FRELINGHUYSEN. The last question I have: What are you doing about recruiting and retaining civilian and military people that are, shall we say, knowledgeable about mental health?

Mr. DUEHRING. Well, of course there has been a significant increase in the requirement, the whole medical career field.

Mr. FRELINGHUYSEN. I sort of remember where some of the other services are, but quite honestly I cannot remember what your percentages were. How do they stand?

There is a lot of competition out here——

Mr. DUEHRING. Absolutely.

Mr. FRELINGHUYSEN [continuing]. From the civilian side, just in the general population. But how about on the Air Force side of things?

Mr. DUEHRING. I will give you just a tidbit, and then I am probably going to have to take the rest to give you an answer back.

But I know that we have 600 active duty mental health providers now. And we added 200 civilians to that recently. I just got that information as we were preparing for this hearing.

But as far as the overall numbers, I would be happy to send those to you if I could.

Mr. FRELINGHUYSEN. I would like to have those for the record.

Again, thank you both for your testimony.

[The information follows:]

Air Force active duty and reserve/guard components are using all accession and retention pay authorities established by 37 USC Chapter 5. The Office of the Assistant Secretary of Defense (Health Affairs) sets rates for medical specialties in each military component, with input from medical departments of all three services. Pays for a particular specialty are generally level across the three Services. 37 USC Sec 335, Consolidation of Special Pays, will allow accession and retention pays for mental health specialties that previously had been ineligible for these pays. It is anticipated this guidance will allow each Service the authority to better focus available funds to support accession and retention of critically short specialties.

Air Force active duty and reserve components also use 10 USC Chapter 105 and 10 USC Sec 16302 for the Health Professions Scholarship Program and Health Professions Loan Repayment Program with regards to these accession and retention programs. The Active Component also uses Department of Defense Instruction 6000.13 for implementation guidance for many of our accession and retention programs.

Our civilian component has multiple tools to attract and retain civilian mental health providers:

- Recruitment bonuses for new accessions (up to 25% of base salary)
- Retention allowances to sustain high caliber employees (up to 25% of base salary)
- Credit for non-federal and Uniformed Service experience for annual leave accrual for new employees
- Student Loan Repayment for new accessions ($10K per year with $60K max payment)
- Superior Qualification Appointments (for GS employees only) provides an advance in-hire rate up to Step–10 of assigned grade

MENTAL HEALTH SPECIALTIES

Specialty	Civilian auth/assigned	Civilian percent manned	Active duty auth/assigned	Active duty percent manned	Retention rate * at mid-career (10 YOS) (percent)
Psychologist	18/18	100	256/205	80.1	6
Social Worker	168/165	98.2	199/209	105.0	53
Psychiatrist	1/1	100	87/94	108.0	25
Mental Health Nurse **	1/1	100	47/55	117.0	39
Mental Health Technician	11/12	109	763/695	91.1	22

Table taken from 2008 HMPDS Report.

* Retention Rate added by AF/A1I based on current data. Mid-career (10 yr point) used as commonality among career fields with differing educational obligations and requirements.

** Mental health Nurse: Due to small population size, Retention Rate may have high error rate.

RETENTION RATES

The average career length (ACL) for mental health providers is as follows:
(Time is in Commissioned Years of Service (CYOS))
ACL—Social Worker—12.78 CYOS
ACL—Mental Health Nurses—11.22 CYOS*
*Mental Health Nurse (46P) authorizations are extremely small (<100); data based on 3–yr average (FY06–FY08)
ACL—Psychiatrists—8.78 CYOS
ACL—Psychologists—5.47 CYOS
The decision point is where all military and educational obligations have been fulfilled and the individual is first able to separate. Based on historical data, retention for Mental Health Providers is as follows:
Clinical Psychologists—20% after their military obligation is complete (4yrs)
Mental Health Nurses—58% after their military obligation is complete (4 yrs)
Psychiatrists—25% after their military obligation is complete (9 yrs)
Social Worker—88% after their military obligation is complete (4yrs)

PILOTS AND NAVIGATORS

Mr. ROTHMAN. I am going to ask a couple of follow-up questions.

General, you mentioned briefly that there was some additional need for bomber pilots and navigators. Could you describe that a little bit?

General NEWTON. Yes, sir, I can. Again, it is not just within the bomber community per se in terms of our what we call "rated community," those who are trained specifically for flight duties on the officers' side.

There is—throughout our Air Force, some needs that need to be met across the rated community. It is not just Airmen who are flying aircraft, but those who are assigned particular duties that may be outside the cockpit. For us, it is staff that requires their expertise at a staff level.

And so, as we focus on reinvigorating the nuclear enterprise as our very top priority, we are making sure that we have the appropriate number and quality of air bomber pilots and navigators to fulfill those tasks. Again, we see that as an increased requirement, and we are going to make sure that we fulfill those requirements.

Mr. ROTHMAN. And is it fair to say that the 2010 budget submission will reflect your attention in that area?

General NEWTON. Sir, our plan is to make sure that we indeed fulfill those requirements.

PERSONNEL AND READINESS

Mr. ROTHMAN. Let me ask you, if you were sitting up here, what question would you ask? What should we know that we have not asked about with regard to Air Force personnel and readiness?

General NEWTON. I will save the last for you.

But, sir, if I may, I believe the discussion—if I could take a reflection on the last hour and a half or so: The discussion with regard to all things people in the United States Air Force is, first, a very top priority of ours. We are an Air Force that provides total force capabilities to the joint warfighter, as I mentioned, to nearly over 135 locations around the globe.

As we meet the demands of today, the issue is not necessarily just an end strength issue in terms of what the number is, but in terms of how we are going to shape that force, how we are going

to shape that force for the joint warfighter today, but also for tomorrow.

That compels us to put our priorities, sir, as our previous discussion with regard to intelligence, surveillance and reconnaissance capability. It requires us to put a priority into the nuclear enterprise, to reinvigorate the nuclear enterprise. It also compels us to make sure this growing cyber capability with regard to network attack and network defense is at an absolute premium. It is to make sure that we continue to maintain a capability to provide acquisition excellence to this Nation and to this Department.

Also we have to do effective maintenance with our aircraft. It is all based on priorities, from reinvigorating the nuclear enterprise, and partnering with the joint and coalition team to winning today's fight.

It is certainly about taking care of our Airmen and their families. It is making sure that we continue to modernize our aircraft, and space inventory as well, and recapturing acquisition excellence.

The last point I would raise, what I could have described to you would have been in terms of platforms, things, aircraft, space capabilities. What we focus on is our people. We provide opportunities for development and take care of our Airmen and their families.

Mr. ROTHMAN. Mr. Secretary.

Mr. DUEHRING. You know, I started out in the Air Force a long time ago and retired, and then fortunately came back after working for a while with OSD. And my Air Force has changed quite a bit.

I was a fighter pilot—and we talked about that a little bit in the beginning—but that is not necessarily where most of the work is being done today. You know, that may well be more tomorrow's mission. And right now, I do not think that the American public realizes how much we are in the fight every single day because we do not deploy to do it.

If you go to Minot Air Force Base, if you go to North Dakota, the Guard unit up there, the Predator Guard unit, if you go to Creech, if you go to any of the missile career fields, if you go to the space folks out in Colorado Springs or if you go up to Fort Dix and watch the people who are going through—on their way over, of course—you then would get some sense of the day-in-and-day-out participation, seven days a week. And this brings about some problems that we have to watch out for.

The stress is not always associated with deployments. The stress could well be the individual sitting there in a secure environment at Creech who is actually launching missiles on targets and then has to decompress as he walks out the door, get into his car, go home and listen to how little Johnny did in first grade. That is difficult for the human mind to do. You do not have the time that we used to have, that we had when we came back from Southeast Asia just to kind of heal and get back into the flow.

It is a different kind of stress, and so that is why I think we have to watch our folks from all aspects, but appreciate the contributions they make.

And I want to put in a pitch for the Guard and Reserve. Many people still think of the Guard and Reserve as a strategic reserve; and in fact, we have lost all the people who I think signed up for the 39 days a year and the education benefits they could get for

it. Folks coming in today know that if they are going to be working in the Guard or Reserve it is going to take more time than 39 days a year, and they are willing to do it. If we meet their needs, they meet ours. And this is true of the employers as well.

We did not talk about employers. Very, very critical to this huge part of our family. And yet after eight years in this war on terrorism, the employers, the Guardsmen, the Reservists, their families as well as our active duty people keep coming back, coming back, coming back.

I am astounded, frankly. I thought we were going to go off a cliff years ago. We did not go over that cliff. It is amazing that these people still come, and it is a tribute to some very good programs that I think we have going.

Mr. ROTHMAN. Thank you very much. And I just want to conclude my part with what our illustrious chairman always says. We are in the appropriating business. We want to make sure that we appropriate to meet the needs that you have. And so it is up to you to let us know what needs you have. And again, our assumption is going to be that the 2010 budget submission addresses all the needs that you have. And if not, you will let us know.

Mr. Kingston.

SERVICE ACADEMIES

Mr. KINGSTON. Thank you, Mr. Chairman.

Mr. Secretary, I was at West Point this summer, and one of the things I was shocked to learn is that there are 18 Members of Congress who do not utilize appointments to West Point.

Is that number, 18, also true for the Air Force Academy.

Mr. DUEHRING. I do not know the exact number, but I know this is a topic of discussion at our Board of Visitors meetings. And what they did—I am in an oversight position, so it is up to them to do—is, our members—I think you could talk to Congressman DeFazio, Congresswoman Sanchez, would be good people to talk to, they and their staffers are working laterally within the organization, within Congress, because we found that in many cases the staffers do not understand the program.

And they are the first people that someone would come to look for information. How do I do this? I am interested. Where do I go? And to make sure that they are aware of it. Because we found at the last meeting that the Members are interested, but you get involved in a lot of other subjects, a lot of other priorities. And so they have instituted a program to kind of help give a boost, the input.

And this touches on the diversity issue that Congresswoman Kilpatrick talked about earlier, too, which is a big concern for us at the Academy. So I would perhaps mention that those people are available to whittle down that number.

Mr. FRELINGHUYSEN. Jack, would you yield?

Mr. KINGSTON. Yes.

Mr. FRELINGHUYSEN. I serve on the Board of Visitors for the Naval Academy. And they have turned the whole issue around. They have gone after, you know, I think in a very comprehensive way, all those Members of Congress that for one reason or another have not been, you know, fulfilling their appointment obligations.

They have a very comprehensive plan. And I assume most of the service academies are doing something similar.

But I feel a lot better, certainly, on the diversity side.

Mr. KINGSTON. I wanted to give you an opportunity to make sure everybody in the room realized that was going on, that there are 18 Members, and yet people have—you know, will stand up and smack you around. I cannot believe a Member of Congress would not know about this or would—let staffers get away with not knowing the process.

So Members of Congress need to step forward and say, Look, I disagree with the whole system, and that is why I am not going to do it instead of feigning ignorance about the process.

But I am glad you guys are taking steps forward, because I think it is just something people need to know here as we talk about recruitment, that we have Members that are not giving young men and women in their own district an opportunity to participate in one of the best educational opportunities in the world. And it is not necessarily a career in the Air Force. And so if you do not want to go full-time career, you can still get that education.

LASIK SURGERY

But the second question I had on LASIK surgery. You know, we are all taught from youth on that you have to have great eyes to be a pilot. Has LASIK surgery changed that for those of us who do not have that gift?

Mr. DUEHRING. I know that there is a difference in the accession policy for pilot training between the Air Force and the Navy, and it may well be on this. I am getting into a gray area that I do not know a whole lot about.

Would you like for us to give you the latest policy on that? I am sure that is readily available.

Mr. KINGSTON. I think people it would be good for us to know, because I am assuming that if Air Force or Navy pilots are allowed to have corrective eye surgery, then it is really a strong endorsement of the procedure, and that is why I am asking it.

Mr. DUEHRING. I would be guessing at this point, sir. And I would like to just give you a straight answer, if I could, by going back to our Surgeon General.

Mr. KINGSTON. There is probably a lot of data out there now that was not out there 10 years ago, I would imagine.

Mr. DUEHRING. We could look at it. Yes, sir.

Mr. KINGSTON. Thank you, Mr. Chairman.

[The information follows:]

The USAF-Refractive Surgery (USAF–RS) Program permits both advanced surface ablation (ASA) and intra-stromal ablation (ISA) procedures in eligible Air Force active duty and Air Force Reserve Component members including pilots and pilot applicants. ASA approved procedures include photorefractive keratectomy (PRK), laser in-situ epithelial keratomileusis (LASEK), epi-LASIK and wave-front guided photorefractive keratectomy (WFG–PRK). ISA approved procedures include standard laser in-situ keratomileusis (LASIK) and its variants, wave-front guided laser in-situ keratomileusis (WFG–LASIK), and technological advances in the basic LASIK procedure, such as femtosecond technology. The incorporation of WFG treatments into refractive surgery is expected to improve visual outcomes, particularly in low light and low contrast situations.

Other refractive surgery procedures, such as a radial keratotomy, intracorneal rings, hyperopic (>+0.5 diopters) PRK and hyperopic LASIK are less predictable, are

associated with more complications and may not achieve acceptable levels of stabilization. Therefore, these procedures are not allowed for either trained flight personnel or applicants. In addition, monovision treatments (one eye corrected for distance and the other eye corrected for near) are not allowed for aircrew.

The Air Force Medical Service can authorize both PRK and LASIK for aircrew. PRK is currently preferred due to its proven track record and issues regarding corneal flap healing. The Navy allows both LASIK and PRK. Pre-refractive surgery refractive error limits are similar for both Air Force and Navy, though the Navy will accept a greater degree of far-sightedness (most refractive surgery candidates are near-sighted).

Data from the USAF–RS Registry to date shows the clinical results after PRK have been excellent with nearly 100% of flying duty personnel returned to full operational activity. Following PRK, about 1% of pilots and 5% of other aircrew are required to wear spectacles to achieve distant 20/20 vision. Only 1% cannot achieve pre-op best corrected level of vision after surgery. Average duty not to include flying time is currently 13 weeks for PRK. Statistics on LASIK are not available due to the few numbers of aircrew that have undergone this treatment.

Mr. ROTHMAN. Ms. Kaptur.

SUICIDES

Ms. KAPTUR. Thank you, Mr. Chairman. Thanks for the second round.

I wanted to go, General Newton, back to my interest, one of my interests here. Out of the 208,000, according to your testimony, total force Airmen, do I read it correctly that 189 committed suicide since 2003? Is that right, based on the numbers that are in your testimony?

General NEWTON. Yes, ma'am. I would have to refer to the written record.

Ms. KAPTUR. One hundred fifty—it is page 14. Do I just add those up and I get the total? Is it 39—from 2003 to 2008, 39 suicide victims had deployed in the previous 12 months, but 150 victims had never deployed?

Is that a subset of the total or is that the total if you add those two numbers together, please?

My question is, since 2003, how many Airmen have committed suicide.

General NEWTON. Let me get back to you take that for the record.

[The information follows:]

Since 2003 the Air Force has had a total of 234 active duty suicides through the end of 2008. This equals an average of 39 suicides per year and an average rate of 11 per 100,000. This compares to an average rate from 1987 to 1996 of 13.5 per 100,000.

Suicides/Suicide Rate: Calendar Year 2008: 39/12.1* (rate per 100,000)
Calendar Year 2007: 34/10
Calendar Year 2006: 42/12.1
Calendar Year 2005: 31/8.9
Calendar Year 2004: 49/13.1
Calendar Year 2003: 38/10.2

*Calendar Year 2008 data has changed since original report to Congress as the Armed Forces Medical Examiner recently determined a death in July 2008 to have been a suicide.

RETENTION OF HEALTH CARE PERSONNEL

Ms. KAPTUR. All right.

In your testimony on another page you talk about the Air Force's inability to retain experienced health care personnel. For the 10-year point minus 27 percent for physicians; minus 40 percent for

dentists, page 11; minus 31 percent for nurses; minus 33 percent for biomedical; am I reading that correctly?

General NEWTON. I think that is not necessarily a negative factor. I think that is short of our goals that we are trying to—either from recruiting or retention. We are only retaining at the 10-year point is approximately 27 percent for physicians, approximately 40 percent for dentists, 31 percent for nurses and 33 percent, biomedical; within the health professionals.

Ms. KAPTUR. So if they leave, you hire someone else? You are just saying they are not staying 10 years; is that what that says?

General NEWTON. We would like to retain more. And again, we are only meeting 27 percent of our retention goals for physicians over that 10-year period.

Ms. KAPTUR. Would nurses be your largest category of total personnel? Physicians, dentists, nurses, biomedical science, administrators, what would be your largest category there?

General NEWTON. It may be administrators, but let me take that back. But nurses would be a significant part.

Ms. KAPTUR. Pretty high?

General NEWTON. Yes, ma'am.

Ms. KAPTUR. Could you get back to me on what percentage of those would be psychiatric nurses?

General NEWTON. Yes, ma'am.

Ms. KAPTUR. And specifically with that training?

General NEWTON. Yes, ma'am.

[The information follows:]

The Air Force Medical Service consists of five corps. After training numbers are removed, the largest is the Nurse Corps at 3,132 personnel. Of the personnel identified in the 2008 Health Manpower and Personnel Data System (HMPDS) Report, 1.7% (55 personnel) of the Nurse Corps is identified to have specialized training as "psychiatric nurses". This designation includes two specialties, the "Mental Health Nurse" and the advanced practice "Psychiatric Nurse Practitioner". The "Mental Health Nurse" primarily works as a mental health provider in the outpatient setting.

Ms. KAPTUR. Then on page 18 of your testimony you state that there is a central database that you maintain that tracks suicide events and facilitates the analysis of potential risk factors.

Do you maintain such a database for PTSD, for other neuropsychiatric conditions? For flashbacks? What kind of database do you maintain for neuropsychiatric conditions?

General NEWTON. Let me get back with you on that because again I think that has a lot to do with how we prevent and treat and so forth. And that is very essential.

Ms. KAPTUR. What data are you collecting and how have you interacted with it? What is it teaching you?

General NEWTON. And perhaps what you do with the data.

Ms. KAPTUR. What you are collecting, and then how are you interacting as a service with that.

And then I am very interested in the architecture at DoD, because we have been fighting to get it, and I am not sure we are there yet. We met with the Surgeons General; and frankly, the Navy was the most articulate of all the services we met with. We will see what they are like this year when they come up before us.

But to try to get all of you to work together—you know, what is your overarching perspective on this subset of illnesses as a part

of total force, and what are you doing about it? It seems to be different in each department. And do you assign someone to participate in an agency-wide, a department-wide approach to dealing with this set of illnesses?

General NEWTON. Actually, we do participate with the other Services. And as I refer to my comments earlier, I personally met with the Army Deputy Chief of Staff for their personnel.

As you have heard, I am sure, the Army has gone through some challenges, as well, with regard to suicides. He and I have had lengthy conversations and discussions and interacted directly in terms of the programs that they are putting forth in terms of what we can share amongst our Services. That is absolutely essential, the integration of the data, the understanding of the nature of what the data is telling us, how it is not necessarily just kept within one Service, but we integrate that with the other Services is important.

Ms. KAPTUR. I know my time has expired, but I would very much appreciate an answer back explaining to me how Air Force participates at DoD with the other services, at what level you participate in discussions about this set of illnesses, and what kind of architecture currently exists at the Department of Defense for these illnesses.

General NEWTON. Yes, ma'am.

Ms. KAPTUR. Thank you.

Thank you, Mr. Chairman.

General NEWTON. Thank you.

Mr. ROTHMAN. Ms. Granger?

Ms. GRANGER. I have no questions.

Mr. ROTHMAN. Mr. Bishop?

Mr. BISHOP. Nothing.

Mr. ROTHMAN. The Committee is adjourned until 10:00 a.m. tomorrow.

I want to thank you, Mr. Secretary, and you, General Newton. A wonderful presentation.

[CLERK'S NOTE.—Questions submitted by Mr. Murtha and the answers thereto follow:]

MISSIONS AND REQUIREMENTS

Question. The Air Force is now embracing a collaborative and supportive role in the types of operations being conducted in Iraq and Afghanistan. In general, Air Force leaders are attempting to change the Service's culture to meet new challenges. While the Air Force has always provided mission support in the struggle against extremism, these missions were designated "In Lieu Of" (ILO). ILO is defined as a standard force and equipment that is deployed to execute missions and tasks outside of its core competencies. The Air Force now views these missions as core responsibilities and now refers to ILOs as Joint Expeditionary Tasking (JET). However, to support all JET requirements there are some fundamental realities associated with the impact of increased deployment tempo and requirements. These requirements are filled at the expense of traditional missions.

General Newton, the Chief of Staff of the Air Force has stated he wants to change the Air Force's culture. Please elaborate what types of changes we can expect to see in the Air Force?

Answer. The Air Force is committed to the Joint fight. We are an equal member of the Joint team as indicated by our common ethic "Send me." In December 2008 the Air Force used Joint Expeditionary Taskings as an all-inclusive action and term connoting the spirit of "All in" and denotes our role as joint partners. Additionally, we reinforce newly established Air Force Priorities as a part of the culture shift:

1. Reinvigorate the Air Force Nuclear Enterprise; Accountability, precision, and reliability in Air Force processes
2. Partner with the Joint and Coalition team to win today's fight; joint capabilities, interoperability, trust (C2, ISR, non-traditional roles)
3. Develop and care for Airmen and their families; reinforce our Warfighting Ethos, expeditionary combat mindset
4. Modernize our aging air and space inventories; reset and build a balanced force for the future...no litmus tests
5. Recapture Acquisition Excellence; process, people, performance

Question. General Newton, what new missions and requirements will the Air Force take on as we move forward? Of those, how many were once performed by the Army and Marine Corps?

Answer. The Air Force has been involved in the performance of joint expeditionary tasking (formally termed In-lieu Of) missions since 2002. The Air Force began with approximately 1,500 total requirements. We have experienced an increase in such taskings by 10 percent per fiscal year up to a total of 6,500 in Fiscal Year 2008. The majority of the original non-standard taskings were Army shortfalls; however, more recently the growth in these requirements has been for training teams. While these teams don't require the Air Force to work out of its core competencies none of the Services actually organize, train, and equip to perform this mission. While the Air Force does expect some continued growth in training team requirements, we don't anticipate any new missions.

Question. Mr. Duehring, how many Airmen are currently deployed in the Central Command Area of Responsibility, and of that, how many are used for Joint missions?

Answer. The Air Force currently has 27,119 Airmen deployed to the U.S. Central Command Area of Responsibility. Of those, 4,240 Airmen are deployed in support of Joint Expeditionary Taskings.

Question. General Newton, the mission to conduct intelligence, surveillance and reconnaissance for combatant commanders is vital. It is our understanding that the Air Force is currently playing a critical role in this mission, a role that is expected to continue expanding to match 50 unmanned Combat Air Patrols. Will this expanded role affect Air Force intelligence, surveillance and reconnaissance manning requirements and, if so, how is the Service addressing these needs?

Answer. The Air Force is working with Office of Secretary of Defense on the Fiscal Year 2010 President's Budget request to fund active duty end strength to just over 332,000 to support new/emerging missions and robust existing missions, such as providing manpower to increase Predator/Reaper/Distributed Common Ground Systems operational capability to 50 Combat Air Patrols.

Question. Mr Duehring, since the ISR mission is a growing field, are there plans to provide a special pay for this?

Answer. No. The Air Force does not plan to offer a special pay for the Intelligence, Surveillance, and Reconnaissance mission. A majority of the career fields within the Intelligence, Surveillance, and Reconnaissance mission already receive additional compensation through existing special and incentive pay programs (e.g., Selective Reenlistment Bonus, flight pay, etc).

Question. Gentlemen, what is the Air Force's nuclear manning requirement and how are they sourced? Are you able to fully source all your requirements for this field? If not, what are your shortfalls?

Answer. The Air Force manning requirements to support the nuclear mission differ from the Joint Expeditionary Taskings, in that nuclear mission requirements are funded permanent party authorizations. The Air Force sources these requirements from core career fields. We actively manage the career fields to ensure we're able to meet mission requirements.

Currently, the only career fields supporting the nuclear enterprise which are projected to have chronic shortages are the bomber pilots and combat systems operators. However, these shortages are part of larger rated management issues and not limited to the nuclear force.

AIR FORCE SUICIDE PREVENTION

Question. To prevent suicides the Air Force relies on the Air Force Suicide Prevention Program (AFSPP). The Air Force believes the AFSPP has highlighted community awareness of suicide and suicide risk factors. In addition, it has created a safety net that provides protection and adds support for those in trouble. This program is a population-oriented approach to reducing the risk of suicide. In addition, the program has implemented eleven initiatives aimed at strengthening social support, promoting development of social skills, and changing policies and norms to encour-

age effective help-seeking behaviors. AFSPP's eleven initiatives include: Leadership involvement, Suicide prevention in professional military education, Guidelines for use of mental health services, Community preventive services, Community education and training, Investigative interview policy, Critical incident stress management, Integrated delivery system (IDS), Limited privilege suicide prevention program, Behavioral health survey, and Suicide event surveillance system.

Mr. Duehing, does the Air Force have any program for Airmen and their families to prepare them for the stressors of war?

Answer. The Air Force supports Airmen and their families from the front line to the home front. At home, information and referral services are offered directly to spouses and families.

Over the past year, the following programs and services were offered: Pre-deployment briefings for 100,000 members and families; free weekly morale calls to keep families connected and help reduce their sense of isolation; reintegration briefings for military spouses that prepared them for changes during the separation; free oil changes for each deployed family; and non-medical counseling sessions for families. Airmen are also kept informed through Professional Military Education where suicide is addressed as a leadership issue with a focus on knowing, recognizing, coping and dealing with pre- and post-deployment stressors.

The Airmen Center in Al Udeid, Iraq provided numerous consultations on financial readiness, reintegration, and reunion. Air Force provides 16,000 hours of free child care each month to assist Airmen with longer hours on evenings, overnight, and weekends. Air Force also partners with the Air Force Aid Society to provide free child care to parents during circumstances such as deployments, remote tours of duty, and extended hours. The Youth Camping Program offers camp experiences for military children annually. The Air Force Reserve Command also hosted a deployment camp for children of guard and reserve members.

Additionally, the Air Force united with the National Military Family Association Operation Purple Camps to provide free, week-long camps to help military kids experience fun while learning coping skills to deal with war-related stress.

Question. What screening process does the Air Force use to detect possible mental health issues before and after deployment? In addition, please explain what services are available to Airmen in theater.

Answer. All Airmen are screened for mental health concerns upon accession and annually via the Preventive Health Assessment. Before deploying the Pre-Deployment Health Assessment is conducted and the mental health clinic screens medical records for those who may require a personal interview. While deployed there are combat stress facilities that are available to monitor the health of deployed Airmen and assist when needed. The Air Force operates two large combat stress facilities and has many other smaller clinics attached to our medical facilities in deployed locations. All of these teams are active in prevention and outreach while taking self-referrals and primary care referrals when treatment is required. At the end of the deployment Airmen are again screened using the Post-Deployment Health Assessment and appropriate referrals are made in theater or upon redeployment. After returning home Airmen are screened once again with the Post-Deployment Health Re-Assessment.

RECRUITING AND RETENTION

Question. In fiscal year 2008, overall active duty Air Force retention rates finished below annual retention goals, while the Air Guard and Reserve officer and enlisted rates met or exceeded all aggregate retention goals. Active duty retention should trend slightly upward due to the poor state of the economy during fiscal year 2009. However, the Air Force will still continue to see shortfalls in critical and stressed specialties in officer and enlisted career fields of security forces, combat control, operations intelligence, and air field operations. To address this problem the Air Force has targeted retention bonuses to include Selective Reenlistment/Initial Enlistment Bonuses and Critical Skills Retention Bonuses for officers. Selective Reenlistment Bonuses are the most effective, responsive and measurable tool for targeted retention. Additionally, the Air Force has instituted voluntary and involuntary retraining for officers and enlisted targeting career fields with overages into career fields with identified shortages.

Gentlemen, since the Air Force is very close to its planned end strength goal what force shaping measures will the Air Force use to get the right mix of personnel it needs?

Answer. The Air Force will adjust accession levels by career field, offer initial enlistment bonuses (to recruit into particular career fields), retrain from skills with

inventory surpluses to skills with inventory deficits, and offer Selective Reenlistment Bonuses to skills where we need to boost retention.

Question. General Newton, now that the Air Force is embracing a role in ground combat operations in Iraq and Afghanistan, will you start to recruit more for ground combat forces or will you retain the current recruiting model?

Answer. The Air Force is substantially increasing authorized strength levels and therefore recruiting for 1C4X1 (Tactical Air Patrol Party) Airmen who are embedded with Army ground troops to call in air strikes and for 1T2X1 (Pararescue) Airmen.

Question. General Newton, what areas are causing challenges (i.e., stressed career fields) and what specific efforts are being undertaken to address them? What bonus programs are in place?

Answer. We currently have nine enlisted and seven officer specialties that we characterize and monitor as stressed career fields. The stressors for each of the specialties are unique to each specialty leading to a tailored approach to aid them to mitigate the stressing factors. The initiatives, programs and bonuses we use to help these stressed specialties include increased accessions, cross-training, special duty assignment pay, enlistment/reenlistment bonuses, critical skills retention bonuses, aviator continuation pay, and increased promotion opportunity. The following is our current list:

ENLISTED STRESSED SPECIALTIES

1C2 Combat Control
1C4 Tactical Air Control Party
1T2 Pararescue
3E2 Pavement/Construction Equipment
3E3 Structural
3E6 Operations Management
3E8 Explosive Ordnance Disposal
3P0 Security Forces
6C0 Contracting

OFFICER STRESSED SPECIALTIES

12S Special Operations Navigator
13D Control & Recovery
13M Airfield Operations
31P Security Forces
32E Civil Engineer
35P Public Affairs
64P Contracting

Question. Gentlemen, the Committee understands that the Air Force has instituted voluntary and involuntary retraining for officers and enlisted targeting career fields with overages into career fields with indentified shortages. Can the Airmen decline this retraining?

Answer. Retraining of noncommissioned officers (NCOs) is in two phases. Phase I is purely voluntary, but NCOs are advised of their vulnerability for selection in Phase II so that they may decide to take advantage of the wider selection of available specialties. In Phase II, NCOs in specific specialties, grades and years of service are directed to submit retraining applications for remaining retraining opportunities. They may decline retraining, however, doing so makes them ineligible to reenlist and they will be required to separate at the completion of their current enlistment.

Retraining of first-term Airmen is voluntary in connection with reenlistment for a second term—as an incentive to reenlist.

Retraining of commissioned officers is voluntary at this time. Current requirements are small enough to satisfy with voluntary retraining.

Question. Please explain how the Air Force chooses the personnel to retrain. Is there a screening process to determine skills and aptitude for their new specialty?

Answer. Retraining of commissioned officers is currently only voluntary. This is because the requirements are small enough to satisfy with voluntary retraining. Officers in overage specialties and year groups are solicited to apply for available specialties.

Retraining of first-term Airmen is voluntary in connection with reenlistment for a second term—as an incentive to reenlist. As they near the end of their first enlistment, the Airmen may submit applications for published retraining opportunities.

Retraining of non-commissioned officers is in two phases. Specific eligibility requirements are established—grade, years of service, current specialty—along with disqualifying factors from their record like disciplinary actions. NCOs in targeted

overage specialties are individually identified based on these criteria and informed of their vulnerability for retraining. They may apply for available specialties in Phase I or wait to see what requirements remain in Phase II. If directed to apply for retraining in Phase II, they must apply for an available specialty or become ineligible to reenlist, separating at the end of their current enlistment.

All officer and enlisted Airmen are screened to ensure they meet the qualifications of the specialty for which they apply, including a physical examination if necessary. Enlisted Airmen may also retake the Armed Services Vocational Aptitude Battery to try to improve their scores so as to increase the number of specialties for which they are qualified.

Question. Mr. Duehring, what is the average cost to the Air Force to retrain these Service members?

Answer. The total cost per Airman is on average $3,500 for specialties with short training pipelines (approximately $2,700 in travel and per diem plus approximately $800 in schoolhouse operating costs), not including military personnel costs, base operating support tail, construction of facilities and acquisition of major training systems. Specialties with longer training pipelines also require a permanent change of station for training, with associated costs. The relative proportion of retraining requirements with short and long training pipelines varies from year to year, but in Fiscal Year 2009, approximately 1,750 out of 2,600 have short pipelines.

Question. The Committee remains concerned regarding the recruiting and retention for mission-critical occupational specialties. What steps are being taken to fill the specialty occupations?

Answer. Once a mission critical specialty is identified with manning or retention issues, steps are taken to increase accessions, modify or introduce enlistment and reenlistment bonuses and cross-training to help mitigate the problems. Roughly 65 percent of recruits enter the Air Force with guaranteed specialties in their enlistment contracts. The other 35 percent are enlisted in one of four aptitude areas—mechanical, administrative, general, or electronics. The aptitude areas provide the Air Force flexibility to classify these recruits into a specific field just before they graduate from Basic Military Training, allowing for attrition in Basic Military Training and changes in the accession plan. We are currently on track to fill 100 percent of all enlisted specialty occupations for Fiscal Year 2009.

Question. Mr. Duehring, has the Air Force analyzed why these occupational specialties have consistently been under filled? What is the operational impact of these shortages? What resources are needed to fill these positions?

Answer. Yes. The Air Force has analyzed why these occupational specialties have consistently been under filled. High operational demand, rapid mission growth, and technical training constraints are common reasons. The operational impacts of these shortages are; increased work tempo and potential for mission degradation. To address these shortages increased end strength to 332,000 is focused on supporting emerging mission growth and existing mission critical shortages.

Question. Mr. Duehring, recruiting and retention goals are often relayed to Congress in the aggregate providing little or no visibility into how each occupational specialty is staffed. Please provide the Committee on recruiting and retention by Air Force specialty code.

Answer. The Air Force is on track to complete Fiscal Year 2009 at 100 percent in each enlisted specialty (Tab 1).

Line officers are not recruited by specialty. Our commissioning sources produce officers in rated (pilot, combat systems operator, air battle manager), technical (scientists, engineers and weather officers), non-technical (non-rated operations, logistics, support and acquisitions), and judge advocate categories, who are then classified to meet Air Force needs. For Fiscal Year 2009, we expect to meet or exceed requirements for all line officers except electrical engineers, special tactics officers and combat rescue officers (Tab 2). The Air Force reclassifies eliminees from other training pipelines (for example, pilot training) and solicits officers who have completed initial assignments in other specialties to fill shortfalls in these areas.

Non-line officers (health professions and chaplains) are recruited by specialty and continue to be a recruiting challenge (Tab 3).

Retention is better than expected and healthy for most specialties (Tab 4 and Tab 5).

Tab 1—Enlisted Accessions
Tab 2—Line Officer Accessions
Tab 3—Health Professions/Chaplains
Tab 4—Enlisted Retention

Tab 5 – Officer Retention

Tab 1 Enlisted Accession Plan FY 09

Tab 2 Line Officer Metric 09

Tab 3 Health Professions Chaplain

Tab 4 Retention by AFSC

Tab 5 Officer Retention

AFSC	TITLE	Auth	Reserved	Need To Reserve	Current Fill Rate
1A031	In-Flight Refueling	88	88	0	100.0%
1A231	Aircraft Loadmaster	260	231	29	88.8%
1A331	Airborne Mission Sys	119	100	19	84.0%
1A431	Airborne Operations	140	133	7	95.0%
1A731	Aerial Gunner	45	41	4	91.1%
1A831	Airborne Crypto Linguist	227	219	8	96.5%
1C032	Aviation Resource Mgmt	175	160	15	91.4%
1C131	Air Traffic Control	961	830	131	86.4%
1C231	Combat Control	333	315	18	94.6%
1C331	Command Post	82	82	0	100.0%
1C431	Tactical Air Control Party	179	157	22	87.7%
1C531	Aero Con/Warn Sys	113	93	20	82.3%
1C631	Space Sys Operations	90	66	24	73.3%
1C731	Airfield Management	101	95	6	94.1%
1N031	Operations Intel	398	351	47	88.2%
1N131	Imagery Analysis	281	239	42	85.1%
1N231	Comm Signals Intelligence	187	161	26	86.1%
1N331	Crypto Language Analyst	418	373	45	89.2%
1N431	Network Intelligence Analysis	234	169	65	72.2%
1N531	Elect Signals Intel Exploit	79	75	4	94.9%
1P031	Aircrew Flight Equipment	281	231	50	82.2%
1T031	Surv, Evas, Res, Escape	290	280	10	96.6%
1T231	Pararescue	467	433	34	92.7%
1W031	Weather	278	254	24	91.4%
1W032	Special Operations Weather Team	7	7	0	100.0%
2A031	Avnics Test Stat & Comp	274	259	15	94.5%
2A331	A-10, F-15 & U-2 Avionic Sys	283	274	9	96.8%
2A332	Integrated Avi Sys	195	180	15	92.3%
2A333	Tact Acft Maint	1259	1131	128	89.8%
2A531	Aerospace Maintenance	1450	1275	175	87.9%
2A532	Helicopter/Tiltrotor Maint	58	50	8	86.2%
2A533	Integrated Avionics Systems	793	744	49	93.8%
2A631	Aerospace Propulsion	662	571	91	86.3%
2A632	Aerospace Ground Equip	454	387	67	85.2%
2A633	Aircrew Egress Sys	89	83	6	93.3%
2A634	Acft Fuel Systems	210	187	23	89.0%
2A635	Acft Hydraulics Sys	214	181	33	84.6%
2A636	Acft Ele & Environ System	393	340	53	86.5%
2A731	Aircraft Metals Technology	84	71	13	84.5%
2A732	Nondestructive Insp	88	66	22	75.0%

AFSC	TITLE	Auth	Reserved	Need To Reserve	Current Fill Rate
2A733	Aircraft Structural Maint	343	293	50	85.4%
2E031	Ground Radar Systems	87	82	5	94.3%
2E131	Sat Wideband Telemetry Sys	195	184	11	94.4%
2E132	Airfield Systems	103	101	2	98.1%
2E133	Ground Radio Comm	265	254	11	95.8%
2E134	Visual Imag Intrusion Det Sys	42	42	0	100.0%
2E231	Comm, Network Infrastructure Sys	262	237	25	90.5%
2E632	Comm Cable & Antenna System	47	47	0	100.0%
2E633	Voice Network Systems	97	96	0	99.0%
2F031	Fuels	372	341	31	91.7%
2G031	Logistics Plans	57	54	3	94.7%
2M031	Msl & Space Sys Elect Maint	84	55	29	65.5%
2M032	Msl & Space Sys Maint	65	50	15	76.9%
2M033	Msl & Space Facilities	47	21	26	44.7%
2P031	Precision Meas Equip	134	123	11	91.8%
2R031	Maint Mgmt Analysis	81	77	4	95.1%
2R131	Maint Mgmt Production	113	109	4	96.5%
2S031	Material Mgmt	787	652	135	82.8%
2T031	Traffic Management	181	148	33	81.8%
2T131	Vehicle Operations	320	291	29	90.9%
2T231	Air Transportation	547	415	132	75.9%
2T331	Veh & Veh Equip Maint	214	201	13	93.9%
2T332	Special Vehicle Maintenance	73	64	9	87.7%
2T337	Vehicle Mgmt & Analysis	61	58	3	95.1%
2W031	Munitions Sys	798	740	58	92.7%
2W131	Aircraft Armament Sys	840	729	111	86.8%
2W231	Nuclear Weapons	104	95	9	91.3%
3A031	Information Mgmt Spec	608	563	45	92.6%
3C031	Comm - Comp Sys Ops	564	548	16	97.2%
3C032	Comm - Comp Sys Prgm	42	40	2	95.2%
3C131	Radio Comm System	71	62	9	87.3%
3C231	Network Integration	280	276	4	98.6%
3C331	Comm - Comp Sys Plan & Impl	38	32	6	84.2%
3E031	Electrical Systems	222	194	28	87.4%
3E032	Elect Power Production	160	149	11	93.1%
3E131	Heat, Vent, A/C & Refrig.	231	191	40	82.7%
3E231	Pavement & Const Equipment	197	167	30	84.8%
3E331	Structural	160	118	42	73.8%
3E431	Utilities Sys	174	155	19	89.1%
3E432	Liquid Fuel Systems Mainten	32	29	3	90.6%

AFSC	TITLE	Auth	Reserved	Need To Reserve	Current Fill Rate
3E433	Pest Management	26	15	11	57.7%
3E531	Engineering	85	70	15	82.4%
3E631	Operations Management	50	41	9	82.0%
3E731	Fire Protection	522	451	71	86.4%
3E831	Explosive Ord Disposal	441	368	73	83.4%
3E931	Emergency Management	83	70	13	84.3%
3M031	Services	608	497	111	81.7%
3N031	Public Affairs	29	25	4	86.2%
3N032	Broadcast Journalist	33	30	3	90.9%
3N034	Graphic Arts	43	41	2	95.3%
3N131	Regional Band	19	9	10	47.4%
3N231	Premier Band	7	1	6	14.3%
3P031	Security Forces - All Slick	4456	4124	332	92.5%
3S031	Personnel	399	349	52	87.5%
4A031	Health Services Management	347	305	42	87.9%
4A131	Medical Materiel	121	103	18	85.1%
4A231	Biomed Equipment	53	44	9	83.0%
4B031	Bioenvironmental Engr	83	83	0	100.0%
4C031	Mental Health Services	124	105	19	84.7%
4D031	Diet Therapy	60	51	9	85.0%
4E031	Public Health	124	120	4	96.8%
4H031	Cardiopulmonary Lab	41	37	4	90.2%
4J032	Physical Medicine	43	35	8	81.4%
4M031	Aerospace Physiology	17	17	0	100.0%
4N031	Aero Medical Services	829	788	41	95.1%
4N131	Surgical Service	83	67	16	80.7%
4P031	Pharmacy	84	81	3	96.4%
4R031	Diagnostic Imaging	119	111	8	93.3%
4T031	Medical Laboratory	156	133	23	85.3%
4T032	Histopathology	11	11	0	100.0%
4V031	Ophthalmic	18	18	0	100.0%
4Y031	Dental	298	244	54	81.9%
4Y032	Dental Laboratory	52	47	5	90.4%
5J031	Paralegal	30	30	0	100.0%
6C031	Contracting	144	126	18	87.5%
6F031	Financial Mgt & Comptroller	305	269	36	88.2%
8G000	USAF Honor Guard	76	61	15	80.3%
9S100	Technical Applications Spec	41	41	0	100.0%
FY09 Total	Air Force	31497	28083	3415	89.2%

FY 2009 Accession Targets and Year End Commissioning Forecast					
	AFSC	Sustainment	Target	TOTAL	% of Target
Pilot	92T0	1180	1180	1155	98%
Combat Systems Operator	92T1	359	359	322	90%
Air Battle Management	92T2X	115	115	96	83%
Combat Control	13D1A	10	12	6	50%
Special Tactics	13D1B	7	8	6	75%
Air Field Operations	13M1	18	20	24	120%
Space/Missile	13S1	216	265	276	104%
Intelligence	14N1	195	232	245	106%
Weather	15W1	35	37	38	103%
Aircraft Maintenance	21A1	75	88	98	111%
Munitions/Missile Maintenance	21M1	16	17	27	159%
Logistics Readiness	21R1	98	102	112	110%
Security Forces	31P1	43	47	55	117%
Civil Engineer (Arch)	32E1A	2	2	2	100%
Civil Engineer (Civil)	32E1C	10	10	12	120%
Civil Engineer (Electrical)	32E1E	5	5	6	120%
Civil Engineer (Mechanical)	32E1F	5	5	6	120%
Civil Engineer (General)	32E1G	60	63	63	100%
Civil Engineer (Environmental)	32E1J	3	2	3	150%
Communications & Information	33S1	156	161	167	104%
Communications & Information Engineer	33S1A	22	23	12	52%
Band	35B1	0	1	1	100%
Public Affairs	35P1	11	11	16	145%
Force Support	38F1	71	92	103	112%
Judge Advocate	51J1	120	120	120	100%
Analyst	61A1	30	31	29	94%
Behavioral Scientist	61B1	13	14	20	143%
Chemist	61C1	9	8	17	213%
Physics	61D1	17	18	20	111%
Aeronautical Engineer	62E1A	39	41	44	107%
Astronautical Engineer	62E1B	22	23	20	87%
Computer Engineer	62E1C	20	21	24	114%
Electrical Engineer	62E1E	115	120	91	76%
Project Engineer	62E1G	76	80	81	101%
Mechanical Engineer	62E1H	27	28	31	111%
Acquisition Management	63A1	145	100	96	96%
Contracting	64P1	60	63	62	98%
Financial Management	65F1	41	43	43	100%
Cost Analyst	65W1	6	6	10	167%
Special Investigations	71S1	26	29	28	97%
Total Line Officers		3478	3602	3587	100%
Grand Total Nonrated Line Officers		1824	3467	3479	100%

FY09 Health Profession/Chaplain Accessions as of 31 Mar 09					
	Requirement	Accessed	Bank**	% Accessed	% W/Bank
Medical Corps	139	7	9	5%	12%
Medical Corps - HPSP*	215	0	183	0%	85%
Dental Corps	20	5	9	25%	70%
Dental Corps - HPSP*	68	0	80	0%	118%
Nurse Corps	275	98	86	36%	67%
Nurse Corps - HPSP*	10	0	7	0%	70%
Bio-medical Science Corps (BSC)	321	51	46	16%	30%
BSC - HPSP*	66	0	52	0%	79%
Medical Service Corps	35	12	23	34%	100%
Chaplains	25	6	5	24%	44%
* HPSP = Health Professions Scholarship Program					
** Bank = Applicants contracted pending accession					

AFSC	TITLE	End Mar ACL	Historical ACL
1A0X1	In-Flight Refueling	9.32	9.13
1A1X1	Flight Engineer	13.59	14.51
1A2X1	Aircraft Loadmaster	11.16	10.22
1A3X1	Airborne Mission Sys	14.51	10.73
1A4X1	Airborne Operations	8.71	10.71
1A6X1	Flight Attendant	16.32	11.63
1A7X1	Aerial Gunner	11.53	10.74
1A8X1	Airborne Crypto Linguist	9.53	9.31
1C0X2	Aviation Resource Mgmt	11.19	9.69
1C1X1	Air Traffic Control	8.69	7.59
1C2X1	Combat Control	14.02	12.13
1C3X1	Command Post	9.20	9.28
1C4X1	Tactical Air Control Party	11.15	10.58
1C5X1	Aero Con/Warn Sys	8.90	8.35
1C6X1	Space Sys Operations	9.71	8.45
1C7X1	Airfield Management	10.57	8.41
1N000	Intel Manager	27.18	8.61
1N0X1	Operations Intel	10.53	9.76
1N1X1	Imagery Analysis	9.82	9.11
1N290	Comm Signals Intel Supt	26.25	9.15
1N2X1	Comm Signals Intelligence	9.28	8.81
1N3X1	Crypto Language Analyst	9.73	8.99
1N4X1	Network Intelligence Analysis	11.51	10.46
1N5X1	Elect Signals Intel Exploit	10.89	10.44
1N6X1	Elect Sys Security Assessment	12.70	10.51
1P0X1	Aircrew Flight Equipment	11.10	23.13
1S0X1	Safety	11.36	13.25
1T0X1	Surv, Evas, Res, Escape	14.90	12.54
1T2X1	Pararescue	12.02	8.47
1W0X1	Weather	10.95	10.26
2A090	Avionics Supt	27.75	20.31
2A0X1P	Avnics Test Stat & Comp, Sens Sys & EWS	11.39	10.49
2A0X1S	Avnics Test Stat & Comp, Avnics Systems	11.40	9.60
2A300	Aircraft Manager	27.17	7.19
2A390	Tactical Aircraft Supt	24.03	19.32
2A3X1	A-10, F-15 & U-2 Avionic Sys	9.81	8.96
2A3X2	Integrated Avi Sys	8.68	10.40
2A3X3	Tact Acft Maint	11.01	9.81
2A590	Aerospace Maintenance Supt	23.62	21.61
2A5X1	Aerospace Maintenance	11.48	11.57

AFSC	TITLE	End Mar ACL	Historical ACL
2A5X2	Helicopter/Tiltrotor Maint	9.87	11.76
2A5X3A	Int Av Sys, Comm, Nav, Misn	11.19	10.22
2A5X3B	Int Av Sys, Inst & Flt Control	10.64	9.94
2A5X3C	Int Av Sys, Elec Warfare	11.26	11.10
2A5X3D	Int Av Sys, Air Surv Rad Sys	8.69	10.52
2A600	Systems Manager	26.25	24.26
2A690	Aircraft Systems Supt	24.67	18.73
2A6X1	Aerospace Propulsion	12.04	11.21
2A6X2	Aerospace Ground Equip	11.65	10.37
2A6X3	Aircrew Egress Sys	10.88	10.01
2A6X4	Acft Fuel Systems	10.72	10.41
2A6X5	Acft Hydraulics Sys	11.28	11.39
2A6X6	Acft Ele & Environ System	10.82	10.48
2A790	Aircraft Fabrication Supt	22.67	22.98
2A7X1	Aircraft Metals Technology	13.05	11.63
2A7X2	Nondestructive Insp	10.50	10.53
2A7X3	Aircraft Structural Maint	10.96	11.11
2A7X5	Low Observable Aircraft Structural Maintenance	1.00	11.11
2E000	Comm-Elect Systems Mgr	27.70	24.32
2E0X1	Ground Radar Systems	11.30	8.75
2E190	Comm Systems Supt	23.60	21.21
2E1X1	Sat Wideband Telemetry Sys	11.43	10.12
2E1X2	Airfield Systems	12.18	11.94
2E1X3	Ground Radio Comm	11.39	10.59
2E1X4	Visual Imag Intrusion Det Sys	14.23	10.47
2E290	Comm, Infrastucture Supt	25.11	19.73
2E2X1	Comm, Network Infrastructure Sys	10.63	11.16
2E6X2	Comm Cable & Antenna System	13.25	10.90
2E6X3	Voice Network Systems	10.89	11.83
2F0X1	Fuels	10.99	11.05
2G0X1	Logistics Plans	12.73	9.53
2M000	Missile & Space Sys Maint	28.00	25.82
2M090	Missile & Space Sys Supt	24.89	22.11
2M0X1	Msl & Space Sys Elect Maint	9.68	11.48
2M0X2	Msl & Space Sys Maint	10.96	11.75
2M0X3	Msl & Space Facilities	8.93	8.83
2P0X1	Precision Meas Equip	10.74	9.98
2R000	Maint Mgmt	26.98	24.68
2R090	Maint Mgmt Supt	22.27	22.49

AFSC	TITLE	End Mar ACL	Historical ACL
2R0X1	Maint Mgmt Analysis	9.58	7.42
2R1X1	Maint Mgmt Production	10.14	8.55
2S0X1	Material Mgmt	11.83	10.47
2T0X1	Traffic Management	10.91	10.28
2T1X1	Vehicle Operations	10.86	10.18
2T2X1	Air Transportation	10.76	10.96
2T300	Vehicle Management	28.08	25.74
2T370	Vehicle & Veh Equip Maint	21.70	18.20
2T390	Vehicle Management Supt	22.99	22.22
2T3X1	Veh & Veh Equip Maint	10.67	8.10
2T3X2A	Special Veh Maint Fire Trucks	10.26	7.12
2T3X2C	Special Veh Maint Mhe	8.44	2.76
2T3X7	Vehicle Mgmt & Analysis	11.81	5.67
2W0X1	Munitions Sys	11.79	11.68
2W1X1	Aircraft Armament Sys	11.64	11.95
2W2X1	Nuclear Weapons	9.49	10.68
3A0X1	Information Mgmt Spec	11.27	10.19
3C000	Comm-Comp Systems Mgr	26.40	10.15
3C090	Comm-Comp Systems Supt	24.16	21.49
3C0X1	Comm - Comp Sys Ops	8.82	9.43
3C0X2	Comm - Comp Sys Prgm	9.16	9.55
3C1X1	Radio Comm System	8.80	9.68
3C1X2	Electromagnetic Spectrum Mgt	17.75	18.90
3C2X1	Network Integration	8.96	9.23
3C3X1	Comm - Comp Sys Plan & Impl	9.84	10.35
3E000	Civil Engineering Manager	26.11	8.12
3E090	Electrical Supt	25.60	21.53
3E0X1	Electrical Systems	13.19	10.19
3E0X2	Elect Power Production	9.62	9.36
3E1X1	Heat, Vent, A/C & Refrig.	12.88	10.22
3E2X1	Pavement & Const Equipment	10.08	9.22
3E3X1	Structural	13.03	9.31
3E490	Utilities Sys Supt	21.04	21.24
3E4X1	Utilities Sys	9.81	9.92
3E4X2	Liquid Fuel Systems Mainten	11.77	8.94
3E4X3	Pest Management	12.72	10.26
3E5X1	Engineering	9.61	9.07
3E6X1	Operations Management	7.59	8.99
3E7X1	Fire Protection	7.58	6.57
3E8X1	Explosive Ord Disposal	10.45	11.94

AFSC	TITLE	End Mar ACL	Historical ACL
3E9X1	Emergency Management	9.14	11.38
3H0X1	Historian	23.00	13.36
3M0X1	Services	9.84	8.64
3N000	Public Affairs Mgr	27.35	23.14
3N090	Public Affairs Supt	23.71	22.18
3N0X1	Public Affairs	6.91	7.83
3N0X2	Broadcast Journalist	9.95	8.64
3N0X3	Graphic Arts	10.35	10.18
3N0X4	Still Photography	9.14	8.73
3N100	Band Manager	29.00	8.39
3N191	Band Supt	25.00	22.78
3N1X1	Regional Band	17.51	14.02
3N2X1	Premier Band	20.85	17.49
3P0X1	Security Forces - All Slick	7.81	7.54
3P0X1A	Security Forces Mil Work Dog	13.10	13.21
3P0X1B	Security Forces Cmbt Arms	10.85	10.30
3S000	Mission Support Manager	27.47	26.27
3S0X1	Personnel	10.91	10.03
3S1X1	Military Equal Opportunity	18.64	9.28
3S2X1	Education And Training	17.18	13.70
3S3X1	Manpower	16.08	16.47
4A0X1	Health Services Management	10.51	9.46
4A1X1	Medical Materiel	10.22	10.63
4A2X1	Biomed Equipment	13.14	12.69
4B0X1	Bioenvironmental Engr	13.78	10.36
4C0X1	Mental Health Services	8.62	8.64
4D0X1	Diet Therapy	12.17	8.72
4E0X1	Public Health	10.76	10.81
4H0X1	Cardiopulmonary Lab	6.77	8.36
4J000	Physical Medicine Mgr	26.50	27.63
4J090	Physical Medicine Supt	25.33	22.72
4J0X2	Physical Medicine	12.90	8.96
4J0X2A	Orthotic	21.00	6.65
4M0X1	Aerospace Physiology	9.31	11.05
4N000	Aero Medical Service Mgr	29.50	28.18
4N071	Aero Medical Service Supv	15.68	4.01
4N091	Aero Medical Service Supt	25.74	9.15
4N0X1	Aero Medical Services	9.70	7.76
4N0X1B	Aero Medical Serv- Neurology	13.87	3.08
4N0X1C	Aero Medical Serv- IDMT	17.95	4.02

AFSC	TITLE	End Mar ACL	Historical ACL
4N191	Surgical Service Supt	27.00	20.04
4N1X1	Surgical Service	8.29	8.38
4N1X1B	Surgical Serv- Urology	23.35	3.71
4N1X1C	Surgical Serv- Orthopedics	20.47	12.14
4N1X1D	Surgical Serv- Otorhinolaryngology	19.78	19.49
4P0X1	Pharmacy	9.52	10.76
4R000	Diagnostic Imaging Manager	30.00	8.25
4R090	Diagnostic Imaging Supt	29.00	19.40
4R0X1	Diagnostic Imaging	9.08	9.08
4R0X1A	Diagnostic Imaging- Nucl Med	14.88	10.95
4R0X1B	Diagnostic Imaging- Ultrasound	18.55	10.55
4R0X1C	Diagnostic Imaging- Mag Reson	15.76	12.52
4T000	Medical Laboratory Mgr	29.00	8.61
4T090	Medical Laboratory Supt	22.33	22.73
4T0X1	Medical Laboratory	7.59	9.92
4T0X2	Histopathology	11.60	8.74
4V0X1	Ophthalmic	12.44	10.60
4Y000	Dental Manager	30.00	25.77
4Y090	Dental Supt	24.07	22.35
4Y0X1	Dental	11.06	8.91
4Y0X2	Dental Laboratory	9.16	10.97
5J0X1	Paralegal	11.03	12.80
5R0X1	Chaplain Assistant	7.99	11.51
6C0X1	Contracting	6.76	8.26
6F0X1	Financial Mgt & Comptroller	8.02	8.69
7S0X1	Special Investigation	13.19	13.79
8A1X0	Career Assistance Advisor	25.33	9.16
8A2X0	Enlisted Aide	22.09	4.11
8B0X0	Military Training Instr	19.05	17.71
8B1X0	Military Training Leader	17.52	13.90
8B2X0	Academy Mil Training Nco	23.96	11.71
8C0X0	Family Support Ctr	21.05	15.87
8D0X0	Linguist Debriefer	21.33	13.81
8E0X0	Research & Development	1.00	8.35
8F0X0	First Sergeant	24.16	23.75
8G0X0	USAF Honor Guard	11.36	10.00
8J0X0	Correction Custody Supervisor	21.00	24.69
8M0X0	Postal	11.48	12.55
8P0X0	Courier	23.08	17.92
8P1X0	Defense Attache	24.17	10.13

AFSC	TITLE	End Mar ACL	Historical ACL
8R0X0	Enlisted Accession Recruiter	14.11	17.77
8R2X0	Second-Tier Recruiter	19.15	2.01
8R3X0	Third-Tier Recruiter	23.17	6.83
8S0X0	Missile Facility Manager	19.97	12.62
8T0X0	Profess Mil Educ Instr	14.60	16.21
9A0X0	Enl Amn Awaiting Ret- Disq Beyond Cont	4.47	3.59
9A1X0	Enl Amn Awaiting Ret- Disq W/I Cont	1.00	1.03
9A2X0	Amn Await Disch/Sep/Ret- W/I Cont	1.00	1.55
9A3X0	Amn Await Disch/Sep/Ret- Bey Cont	1.00	1.30
9A4X0	Disqualified Airman, Return to Duty Program	1.00	1.30
9C0X0	CMSGT Of The Air Force	30.00	8.51
9D0X0	Dormitory Manager	14.86	15.32
9E0X0	Command Chief Master Sergeant	28.36	24.97
9F0X0	First Term Amn Center	19.20	11.85
9G1X0	Group Superintendent	26.88	11.99
9J0X0	Prisoner	1.00	3.49
9L0X0	Interpreter/Translator	16.87	15.22
9P0X0	Patient	1.00	1.94
9R0X0	CAP USAFA Assistance NCO	1.00	8.34
9S1X0	Technical Applications Spec	10.91	10.68
9T0X0	Basic Enlisted Airmen	3.89	3.77
9T1X0	Officer Trainee	7.44	3.00
9T2X0	Precadet Assignee	6.77	1.30
9U0X0	Enl Amn Inelig For Loc Util	1.00	2.94
9U1X0	Unalloted Enlisted Auth	1.00	8.34
9W2X0	Injured, Combat-Related	1.00	1.00
Total	Air Force	10.19	9.23

AFSC	TITLE	End Mar 09 ACL	Historical ACL (FY00-05 Avg)
11B	Bomber Pilot	19.21	19.53
11F	Fighter Pilot	17.60	17.10
11H	Helicopter Pilot	20.16	20.43
11M	Mobility Pilot	17.70	15.64
11R	Recce/Surv/Elect Warfare Pilot	20.71	16.68
11S	Special Operations Pilot	19.58	20.10
11X	Pilot	18.28	16.38
12B	Bomber Combat System Operator	18.73	18.97
12F	Helicopter Combat System Operator	18.17	19.91
12M	Mobility Combat System Operator	15.95	16.95
12R	Recce/Surv/Elect Warfare Combat System Operator	20.02	17.87
12S	Special Operations Combat System Operator	18.10	19.81
12X	Combat System Operator	18.66	18.13
13B	Air Battle Manager	19.00	15.01
13D	Control and Recovery	20.08	17.70
13M	Airfield Operation	17.64	13.29
13S	Space and Missile	17.81	14.69
14N	Intelligence	12.62	13.26
15W	Weather	16.82	15.87
21A	Aircraft Maintenance	17.54	16.14
21M	Munitions and Missile Maintenance	17.03	16.65
21R	Logistics Readiness	13.70	14.28
31P	Security Forces	17.81	14.81
32E	Civil Engineer	13.35	12.95
33S	Communications and Information	14.61	13.09
35P	Public Affairs	11.08	11.45
38F	Force Support	16.74	13.04
42B	Physical Therapist	11.39	12.07
42E	Optometrist	8.32	11.49
42G	Physician Assistant	10.24	9.04
42P	Clinical Psychologist	4.90	10.18
42S	Clinical Social Worker	11.96	9.62
42Z	(42F/N/T) Biomedical Clinicians	6.17	10.49
43A	Aerospace Physiologist	4.50	10.47
43E	Bionenvironmental Engineer	6.81	12.76
43H	Public Health	10.27	12.41
43P	Pharmacist	6.90	9.91
43T	Biomedical Laboratory	16.21	15.20
43Z	(B/D/M/Y) Biomedical Specialists	8.85	11.11
44E	Emergency Services Physician	11.59	6.08
44F	Family Physician	8.47	8.12
44K	Pediatrician	9.96	9.97
44M	Internist	8.68	8.25

AFSC	TITLE	End Mar 09 ACL	Historical ACL (FY00-05 Avg)
44P	Psychiatrist	9.15	10.11
44R	Diagnostic Radiologist	10.59	6.80
44Z	(A/B/D/G/H/J/N/S/T/U/Y/Z) Physicians	8.46	7.86
45A	Anesthesiologist	7.17	6.60
45B	Orthopedic Surgeon	7.67	8.17
45G	OB/GYN	8.56	7.52
45S	Surgeon	8.56	8.56
45Z	(E/N/U) Surgeons	7.19	7.00
46A	Nurse Adminstrator	19.50	15.70
46F	Flight Nurse	13.41	1.96
46M	Nurse Anesthetist	11.28	1.74
46N	Clinical Nurse	8.61	10.15
46S	Operating Room Nurse	14.68	11.51
46Z	(G/P) Nurses	7.75	10.61
47G	Dentist	11.55	7.20
47Z	(B/D/E/H/K/P/S) Dentists	8.99	11.68
48A	Aerospace Medicine Specialist	16.17	16.31
48G	General Medical Officer, Flight Surgeon	10.29	8.04
48R	Residency Trained Flight Surgeon	7.51	8.59
51J	Judge Advocate	11.87	10.59
52R	Chaplain	18.45	16.86
61S	Scientist	16.15	12.91
62E	Development Engineer	14.72	12.40
63A	Acquisition Manager	15.03	13.52
64P	Contracting	11.23	13.86
65F	Financial Management/Cost Analysis	15.07	12.19
71S	Special Investigator	15.71	11.41
BSC	Biomedical Sciences Corps	9.67	11.43
DC	Dental Corps	13.17	7.48
MC	Medical Corps	9.67	8.30
MSC	Medical Services Corps	15.48	14.55
NC	Nurse Corps	9.57	10.56
Total	Total AF	15.15	13.71
LAF	Line Officers	16.51	13.80

ENLISTMENT AND RETENTION BONUSES

Question. The military services offer a variety of enlistment and re-enlistment bonuses to attract new recruits into the military specialties that are considered "hard to fill," as well as to encourage experienced military members in "shortage jobs" to stay in past their first enlistment period.

Mr. Duehring, what was the total dollar amount spent on Air Force recruiting and retention bonuses for Fiscal Year 2009?

Answer. Bonuses are payments the Air Force makes to individuals in exchange for a commitment to multiple years of service or to encourage enlistment or commissioning in specific skills. For recruiting purposes, we expect to spend $27.7 million in new bonuses and $7.4 million in anniversary payments for previous multi-year contracts, for a total of $35.1 million.

For retention purposes, we expect to spend $200.2 million in new bonuses and $71.8 million in anniversary payments, for a total of $272 million.

Question. Mr. Duehring, what is the range of individual bonuses for recruiting? For retention? Please explain why there are differences.

Answer. The differences in bonus amounts are based on Air Force assessment of what it takes to recruit and retain the various specialties.

Initial enlistment bonuses are provided for nine Air Force Specialty Codes. They range from $1,000 to $3,000 for 4–year and $2,000 to $13,000 for 6-year enlistments.

Selective Reenlistment Bonuses (SRBs) are a monetary incentive to encourage reenlistments in certain skills to sustain career force objectives. SRBs are offered in certain skills by zones (based on years of service) when retention factors indicate a need. Based on retention health, a multiplier (0 to 7) is assigned to determine the dollar amount of the bonus. Bonuses are computed by multiplying one month base pay by the SRB multiple and the number of years reenlisting. Currently, individual bonuses range from $1,000 to $90,000. Individuals receive 50 percent of the bonus upon reenlistment and the remaining balance is paid in equal installments on the anniversary of the reenlistment over the contract period.

Critical Skills Retention Bonus (CSRBs) is an Office of the Secretary of Defense (OSD)-driven requirement geared at retaining eligible Airmen in specific skills and supplements the SRB program. The goal is to increase retention and facilitate an increase in Special Forces. OSD has designated two Air Force specialties (Combat Controllers and Pararescue) to receive the CSRB. Individuals must have at least 19 years, but not more than 24 years, and reenlist or extend for a period of 1 to 6 years to qualify for the CSRB. The contract period (number of years) of the reenlistment/extension determines the individual amount of the bonus, but ranges between $8,000 and $150,000.

Question. Gentlemen, have you found any imbalances or inequities in your recruiting and retention bonus structure?

Answer. No. Our initial enlistment bonus program is meeting the intended purpose of attracting qualified applicants into "hard-to-fill" Air Force specialties. Our retention bonus programs are continuously reviewed in order to target the right population and to combat retention problems. These reviews ensure the structure of our programs remain equitable and balanced within the Air Force.

Question. Mr. Duehring, does the Air Force plan to review its recruiting and retention bonus program?

Answer. Yes. Initial enlistment bonuses are reviewed and adjusted annually based on Air Force requirements and difficulty to recruit. We continuously review all retention bonus programs to ensure we are targeting the correct skills and years of service. Adjustments to the program are made when retention needs dictate and/or when affected by budgetary constraints.

Question. Mr. Duehring, is the Air Force going to promote non-monetary bonuses such as tuition assistance and the new G.I. Bill?

Answer. The Air Force continues to use non-monetary incentives, such as tuition assistance and the Post-9/11 GI Bill, to attract and retain highly qualified applicants, to include those in "hard to fill" and "shortage" career fields. The Air Force promotes military tuition assistance and the various GI Bill programs at numerous points in an Airman's career.

Recruiters brief potential applicants on these programs as they compete with the other Services, civilian employers, and academic institutions for the same eligible population of Americans. During Basic Military Training and Officer Training School, Airmen are briefed on the military tuition assistance and GI Bill programs. Additionally, when enlisted Airmen arrive at their first duty station they are again briefed on tuition assistance and GI Bill programs during the mandatory First Term Airmen Course. Officers are also required to receive counseling and to make a Montgomery GI Bill election within 14 days of arriving at their first permanent duty sta-

tion. As an Airman continues in his/her career, the installation Career Assistance Advisor and Education and Training Section personnel provide follow-up counseling on education options to include military tuition assistance and GI Bill programs. It is also mandatory that Education and Training Section counselors brief all Airmen who are registering for courses on applicable tuition assistance and GI Bill programs and policies. The Air Force has also created the Air Force Virtual Education Center to reach our Internet-savvy Airmen. Airmen can research benefit policy, identify academic institutions, and apply for tuition assistance on-line. Finally, education is inculcated in our Air Force culture and commanders and supervisors at all levels stress the benefits of the tuition assistance and GI Bill programs. This focus on education helps explain the fact that Air Force enlisted personnel have earned approximately 69 percent of all degrees awarded to the Department of Defense enlisted personnel since Fiscal Year 2001.

The Air Force is also aggressively preparing for the August 1, 2009, Post-9/11 GI Bill effective date. Subject matter experts on the Air Staff and at the Air Force Personnel Center are developing and executing a Strategic Communication plan as the Department of Veterans Affairs and Office of the Secretary of Defense make details available. Base Education and Training Sections are currently conducting Post–9/11 GI Bill spread the word briefings. These same briefings, along with frequently asked question and answers, are posted on the previously mentioned Air Force Virtual Education Center. Finally, Air Education and Training Command and Basic Military Training subject matter experts are updating the current lesson plan to ensure the Post-9/11 GI Bill is briefed to all trainees starting on the August 1, 2009 effective date.

Question. Mr. Duehring, can you provide the Committee with a complete list of all recruitment and retention bonuses for each specialty code that is eligible for a bonus? Can you also provide the average bonus for each specialty code?

Answer. Initial Enlistment Bonus: Bonuses are offered in nine Air Force Specialty Codes with options for six or four year contracts. 1A8X1—Airborne Linguist ($12K 6/YR/$3K 4-YR), 1N3XX—Crypto Linguist ($12K 6-YR/$3K 4-YR), 1C2X1—Combat Controller ($13K 6-YR/$3K 4-YR), 1C4X1—Tactical Air Command and Control ($10K 6-YR/$3K 4-YR), 1T2X1—Para Rescue ($13K 6-YR/$3K 4-YR), 1T0X1—Survival, Evasion, Resistance, Escape ($12K 6-YR/$3K 4-YR), 1W0X2—Special Operations Weather Team ($5K 6-YR/$1K 4-YR), 3E8X1—Explosive Ordnance Disposal ($13K 6-YR/$3K 4-YR), 3PDX1—Security Forces ($2K 6-YR)

Title	SRB Average			
	Zone A	Zone B	Zone C	Zone E
In-Flight Refueling	—	26.5K	25.5K	—
Flight Engineer	20K	26.5K	12.2K	—
Aircraft Loadmaster	—	52.9K	12.2K	—
Airborne Mission System	9.5K	30K	12.2K	—
Airborne Battle Mgt System	—	33.9K	25.5K	—
Aerial Gunner	47.3K	49.5K	12.2K	—
Airborne Cryptologic Linguist	57.3K	71.2K	59.5K	—
Aviation Resource Mgmt	9.5K	11.6K	—	—
Air Traffic Control	57.3K	74.5K	76.2K	—
Combat Control	68.5K	77.4K	83K	—
Command Post	9.5k	11.6K	—	—
Tactical Air Control Party	68.5K	77.4K	83K	35.5K
Aero Con & Warn Sys	37.1K	26.5K	25.5K	—
Space System Operations	42K	11.6K	—	—
Airfield Management	47.3K	—	25.5K	—
Operations Intelligence	44.5K	74.5K	68.3K	—
Imagery Analysis	57.3K	77.4K	80.1K	—
Comm Signals Intelligence	30.2K	—	—	—
Cryptologic Linguist	47.3K	71.2K	25.5K	—
Network Intelligence Analysis	20K	59.1K	25.5K	—
Elect Signals Intel Exploitation	—	49.5K	24K	—
Surv, Evas, Res, Escape	42K	49.5K	59.5K	52.2K
Pararescue	68.5K	77.4K	83K	—
Weather	30.2K	26.5K	12.2K	—
Combat Operations Weather	30.2K	26.5K	12.2K	—
Av Test, Comp, Av Sens Sys & Elec War (shreds only).	9.5K	—	—	—

Title	SRB Average			
	Zone A	Zone B	Zone C	Zone E
A–10, F–15 & U–2 Avionic System	42K	26.5K	—	—
Tactical Aircraft Maintenance	15K	—	—	—
Aerospace Maintenance (shreds only)	26.3K	—	—	—
Int Av Sys, Comm, Nav, Misn	20K	—	—	—
Int Av Sys Inst & Flt Control	30.2K	11.6K	—	—
Int Av Sys, Elec Warfare	30.2K	—	12.2K	—
Int Av Sys, Air Surv Rad Systems	9.5K	—	—	—
Acft Fuel Systems	—	26.5K	—	—
Acft Hydraulics Sys	9.5K	11.6K	—	—
Aircraft Metals Technology	9.5K	26.5K	12.2K	—
Nondestructive Inspection	—	11.6K	12.2K	—
Aircraft Structural Maintenance	—	11.6K	12.2K	—
Low Observable Aircraft Structural Maintenance.	—	11.6K	12.2K	—
Ground Radar Systems	26.3K	—	—	—
Logistics Plans	20K	33.9K	—	—
Msl & Space Sys Elect Maintenance	—	—	12.2K	—
Msl & Space Sys Maintenance	—	—	25.5K	—
Msl & Space Facilities	9.5K	—	—	—
Precision Meas Equipment	20K	17K	—	—
Maintenance Mgmt Analysis	20K	—	—	—
Maint Mgmt Production	9.5K	—	—	—
Material Mgmt	9.5K	—	—	—
Vehicle Operations	9.5K	11.6K	—	—
Air Transportation	—	11.6K	12.2K	—
Vehicle & Equip Maintenance	9.5K	—	—	—
Vehicle Mgmt & Analysis	26.3K	26.5K	—	—
Munitions Sys	—	26.5K	—	—
Comm—Computer Sys Ops	20K	—	—	—
Comm—Computer Sys Cont	30.2K	11.6K	12.2K	—
Heat, Vent, A/C & Refrig.	15K	—	—	—
Pavement & Const Equipment	44.5K	52.9K	—	—
Structural	44.5K	52.9K	12.2K	—
Utilities Systems	9.5K	26.5K	—	—
Pest Management	9.5K	—	12.2K	—
Engineering Assistant	9.5K	—	12.2K	—
Operations Management	30.2K	—	25.5K	—
Explosive Ord Disposal	64.5K	71.2K	68.3K	80.5K
Emergency Management	—	26.5K	45.4K	—
Public Affairs	9.5K	—	—	—
Elect Signals Intel Exploitation	—	49.5K	24K	—
Surv, Evas, Res, Escape	42K	49.5K	59.5K	52.2K
Pararescue	68.5K	77.4K	83K	—
Weather	30.2K	26.5K	12.2K	—
Combat Operations Weather	30.2K	26.5K	12.2K	—
Av Test, Comp, Av Sens Sys & Elec War (shreds only).	9.5K	—	—	—
A–10, F–15 & U–2 Avionic System	42K	26.5K	—	—
Tactical Aircraft Maintenance	15K	—	—	—
Aerospace Maintenance (shreds only)	26.3K	—	—	—
Int Av Sys, Comm, Nav, Misn	20K	—	—	—
Int Av Sys Inst & Fit Control	30.2K	11.6K	—	—
Int Av Sys, Elec Warfare	30.2K	—	12.2K	—
Int Av Sys, Air Surv Rad Systems	9.5K	—	—	—
Acft Fuel Systems	—	26.5K	—	—
Acft Hydraulics Sys	9.5K	11.6K	—	—
Aircraft Metals Technology	9.5K	26.5K	12.2K	—
Nondestructive Inspection	—	11.6K	12.2K	—
Aircraft Structural Maintenance	—	11.6K	12.2K	—
Low Observable Aircraft Structural Maintenance.	—	11.6K	12.2K	—
Ground Radar Systems	26.3K	—	—	—
Logistics Plans	20K	33.9K	—	—

Title	SRB Average			
	Zone A	Zone B	Zone C	Zone E
Msl & Space Sys Elect Maintenance	—	—	12.2K	—
Msl & Space Sys Maintenance	—	—	25.5K	—
Msl& Space Facilities	9.5K	—	—	—
Precision Meas Equipment	20K	17K	—	—
Maintenance Mgmt Analysis	20K	—	—	—
Maint Mgmt Production	9.5K	—	—	—
Material Mgmt	9.5K	—	—	—
Vehicle Operations	9.5K	11.6K	—	—
Air Transportation	—	11.6K	12.2K	—
Vehicle & Equip Maintenance	9.5K	—	—	—
Vehicle Mgmt & Analysis	26.3K	26.5K	—	—
Munitions Sys	—	26.5K	—	—
Comm—Computer Sys Ops	20K	—	—	—
Comm—Computer Sys Cont	30.2K	11.6K	12.2K	—
Heat, Vent, A/C & Refrig.	15K	—	—	—
Pavement & Const Equipment	44.5K	52.9K	—	—
Structural	44.5K	52.9K	12.2K	—
Utilities Systems	9.5K	26.5K	—	—
Pest Management	9.5K	—	12.2K	—
Engineering Assistant	9.5K	—	12.2K	—
Operations Management	30.2K	—	25.5K	—
Explosive Ord Disposal	64.5K	71.2K	68.3K	80.5K
Emergency Management	—	26.5K	45.4K	—
Public Affairs	9.5K	—	—	—
Radio & TV Broadcast	20K	11.6K	—	—
Security Forces—Only Slick	9.5K	—	—	—
Security Forces Mil Work Dog	30.2K	11.6K	—	—
Security Forces Combat Arms	30.2K	11.6K	—	—
Medical Materiel	—	11.6K	—	—
Bioenvironmental Engineer	9.5K	—	12.2K	—
Mental Health Services	30.2K	26.5K	—	—
Public Health	9.5K	—	—	—
Cardiopulmonary Lab	15K	11.6K	—	—
Physical Medicine	9.5K	—	—	—
Aerospace Medical Services	9.5K	—	—	—
Aerospace Med Serv, Neurology	9.5K	—	—	—
Aerospace Med Serv, IDMT	20K	26.5K	—	—
Surgical Services, Urology	9.5K	11.6K	—	—
Surgical Services, Orthopedics	9.5K	11.6K	—	—
Surg Serv, Otorhinolaryngology	9.5K	11.6K	—	—
Diagnostic Imaging (shreds only)	26.3K	—	—	—
Dental Laboratory	20K	26.5K	—	—
Paralegal	9.5K	—	—	—
Contracting	57.3K	59.1K	68.3K	35.5K
Financial Mgt & Comptroller	9.5K	26.5K	—	—
Special Investigation	—	30K	45.4K	—
Interpreter/Translator	47.3K	59.1K	38.1K	—
Technical Applications Specialist	9.5K	11.6K	—	—

21 months to 6 years in service
6 to 10 years of service
10 to 14 years of service
18 to 20 years in service
*** All avgs based on current FY takers

AIR GUARD AND AIR FORCE RESERVE ISSUES

Question. General Newton, describe the Air Guards' participation in Air Sovereignty Alert (ASA) mission. What percent of the air defense mission is being flown by the Air Guard?

Answer. There are currently eighteen designated steady-state Air Sovereignty Alert sites in the United States. The Air National Guard provides personnel and equipment at sixteen of the eighteen Air Sovereignty Alert sites while the active duty Air Force provides personnel and equipment at the remaining two sites. Al-

though exact numbers are not readily available, the mission percentage share for Air National Guard and Air Force is relative to this break-out. In keeping with the recommendations of the Congressional Commission on the National Guard and Reserves, the Air Force emphasizes the total force aspect of Air Sovereignty Alert mission and every other operation supported by the Air Force to prevent any institutional prejudice for duty status that might arise from disparate designations.

PERSONNEL TEMPO

Question. The increase of deployments in the past few years for domestic disasters, contingency operations, or Military Operations Other Than War (MOOTW), clearly stresses military personnel and their families.

Gentlemen, what is the average time Airmen are away from home during the year for training, exercises or deployments other than Iraq and Afghanistan?

Answer. Our Airmen averaged about 72 days temporary duty in Fiscal Year 2008 to places other than Iraq/Afghanistan (100,405 Total Force Airmen). Airmen attending training for various reasons to maintain readiness in addition to deployments averaged about 28 days temporary duty in Fiscal Year 2008 (combat skills training, civil affairs, mobile training teams, etc.) (7,176 Airmen—most of these Airmen deploy to the U.S. Central Command area of responsibility.

Question. Mr. Duehring, please explain how the Air Force manages personnel tempo so it does not have an adverse impact on individual unit readiness and training. What systems are in place to track perstempo information?

Answer. Air Force personnel tempo policy is that "A day away is a day away". The Air Force Personnel Center maintains a secure web site that hosts all Air Force personnel tempo data. Personnel tempo data is a collection of TDY time regardless of purpose (deployment, Professional Military Education, etc) and is captured from Travel and Military Personnel Data Systems. Data is collected by individual but aggregated by unit, specialty and weapon systems. Collectively this data helps commanders at all levels manage readiness, determine equitable distribution of TDY days, and/or identify capability limitations.

Question. General Newton, are there certain units or mission skills that are being continually stressed with either normal deployments, training, exercises, or for contingency operations? If so, describe which skills or units are being "stretched thin".

Answer. Yes. We have mission skills (capabilities) that are heavily in demand for operational and other deployments. Air Force operations in support of global combatant commander requirements have required the surge of numerous capability areas since late 2001. Several of our capability areas may be considered "stretched thin" or worse. We manage these in-demand capabilities through a series of "tempo-bands" that set their operational deployments based on dwell—time away versus time at home.

The specialties that are more severely effect are: Aerial Port Operations, Air Field Operations (Air Traffic Control & Combat Airspace and Senior Supervision), B-1 Squadrons, Chaplains (Islamic), Civil Engineering (Prime Beef and Red Horse), Combat Weather, Command Post, Communications (Airlift Systems and Communications Officers), Contracting, Explosive Ordinance Disposal, Intelligence, Logistics Readiness Officers, Medical (Behavioral Health), OSI, Para rescue, Public Affairs Officers, Security Forces, Space Weapons Officers, Supply, Theater Space Operations, Traffic Management and Vehicle Operations and Management.

We also track total force operational demand that considers seven individual measures aggregated into a single tool (Operations Demand Meta metric) to express overall operational demand, vice just deployment dwell. Besides the specialties listed above, the capabilities with very high ops demand are: Helicopter Pilot, Special Operations Navigator, Control & Recovery, Civil Engineering (Pavement & Construction and Structural), In-Flight Refueling, Tactical Air Command & Control and Operations Management.

Question. General Newton, personnel tempo also affects those personnel who remain behind at the home station when units deploy. Describe some of those impacts? For instance, are they working more hours per week?

Answer. Personnel tempo does have an effect on those not deployed. In some instances it does mean that home station personnel are working longer to make up for those who are deployed, especially in mission-critical areas. In other instances, lower priority work simply gets deferred until deployed members return; this is more often the case for less critical areas. Either situation increases anxiety and frustration among home station personnel.

Question. Mr. Duehring, please explain the personnel policies that are in place which minimize the redeployment of an individual or a unit soon after returning to their home stations.

Answer. The Air Force relies on the Air & Space Expeditionary Force (AEF) force generation construct to establish a predictable, standardized battle rhythm ensuring rotational forces are properly organized, trained, equipped, and ready to sustain capabilities while rapidly responding to emerging crises. Air Force capabilities are postured in blocks/pairs scheduled for utilization during specific periods; Airmen are assigned a corresponding AEF indicator. While the baseline AEF postures capabilities at a 1:4 deploy-to-dwell (120–days deployed/480–days dwell), modifications were made to the construct to meet Secretary of Defense planning objectives for sustainable utilization of capabilities at 1:2 deploy-to-dwell for Active Component personnel (179–days deployed/365–days dwell) and 1:5 mobilization-to-dwell (up to 1–year mobilized/5years dwell) for Reserve Component personnel. Capabilities with limited supply or high-demand can be utilized at a 1:1 deploy-to-dwell (179–days deployed/179–days dwell).

Air Force policy directs that "Airmen will only deploy during their assigned vulnerability period except for reaching forward." The need to 'reach forward' is a function of combatant commander requirements exceeding postured capability in any given vulnerability period. We also have policy in place to preclude an Airman's deployment vulnerability being increased when they move from base to base. Upon arrival to a new unit, Airmen are to be assigned to a position providing appropriate time to train/reconstitute prior to their next AEF deployment opportunity.

Question. General Newton, can you please explain the current C–17 aircrew personnel tempo and the reasons behind the C–17 personnel tempo?

Answer. C–17 line qualified aircrews were TDY an average of 99.4 days over the last 12 months as of December 2008. This number includes days TDY for contingency/deployed operations. The highest TDY average is for Travis AFB, CA pilots at 155.4 due to their recent return from a desert rotation. The C–17 deploy-to-dwell ratio is currently 1:6.7. This deploy-to-dwell ratio does not include non-contingency TDYs.

AMC is using C–17s in both intra-theater and inter-theater airlift roles. C–17s fly inter-theater missions globally and sometimes pass through the area of operations. C–17s forward deployed to bases in theater normally operate within the area of operations and provide direct, intra-theater support.

OPERATION NOBLE EAGLE

Question. Operation Noble Eagle (ONE) is a North American Aerospace Defense Command (NORAD) initiative to aid in the defense of North American skies. The ongoing operation began September 14, 2001, in response to the September 11 terrorist attacks. ONE includes air patrols over and around cities and the mobilization of thousands of National Guard and Reserve troops to perform security missions on military installations, airports, and other potential targets such as bridges.

Mr. Duehring, what is the status of Operation NOBLE EAGLE? To date, how many combat air patrol missions supporting Operation NOBLE EAGLE has the active Air Force flown?

Answer. Operation NOBLE EAGLE (ONE) is a continuing Secretary of Defense approved air defense mission conducted by the North American Aerospace Defense Command and US Pacific Command for the protection of the United States and Canada. The Air Force has employed a variety of aircraft to fly over 54,000 ONE missions since September 11, 2001. Of the 54,000 ONE missions, the active Air Force has flown approximately 25% of these missions while the National Guard and Reserve have flown the remaining 75%.

Question. What is the monthly personnel cost of this operation? Is this consistent each month, or do changes to the mission cause the cost to fluctuate?

Answer. Monthly military personnel costs for Operation Noble Eagle for October 2008–March 2009 have been between $3.3 million to $3.88 million, so the majority is consistent with slight fluctuations depending on North America Aerospace Defense Command taskings. In addition, the Air National Guard's Air Sovereignty Alert steady-state personnel costs average an additional $16.1 million per month.

Question. General Newton, the Committee understands that the Air National Guard is not flying these patrols, but is on alert status at a number of installations. What are those installations, and what is the mission of the Air National Guard? Is this on a rotational basis? If so, what is the amount of time for the rotation?

Answer. There are currently 18 designated steady-state Air Sovereignty Alert sites supporting Operation NOBLE EAGLE. The Air National Guard provides the personnel and equipment at 16 of the 18 Air Sovereignty Alert sites while the active duty Air Force provides the personnel and equipment at the remaining 2 sites. The alert site requirement is normally fulfilled by specific tasked units. However, when these units fulfill deployment missions in other operations, the alert site require-

ment is satisfied by another unit. All of these operations fall under the global force management construct process which the Joint Forces Command created to ensure force availability based on national priorities. The amount of rotation varies by unit mission, aircraft type and operational tempo. The Air Combat Command and Air National Guard cooperate to provide the Joint Forces Command with air forces to fulfill worldwide commitments, and Operation NOBLE EAGLE assignments are a part of that larger construct. While the alert sites provide coverage for the entire United States, during National Security Special Events, additional coverage may be directed by Commander, NORAD and then combat air patrols may be flown at various locations over and around cities. In keeping with the recommendations of the Congressional Committee on National Guard and Reserve, the Air Force continues to emphasize the total force aspect of this and every mission to erase any institutional prejudice for duty status that might arise from disparate designations.

Question. Mr. Duehring, what is the cost of the homeland defense mission to the Reserve components?

Answer. The total projected Fiscal Year 2010 Air National Guard cost (manpower and operations) to support Operation NOBLE EAGLE and Air Sovereignty Alert is $307.7 million. This total can be broken out between command and control and execution costs. The cost for command and control (which includes 1st Air Force, Headquarters Air Force staff, Air Operations Center, Western Air Defense Sector, Eastern Air Defense Sector, and the Alaska and Hawaii regions) is approximately $204 million. The cost for executing the Air Sovereignty Alert portion of the Operation NOBLE EAGLE mission for the Air National Guard (e.g., the 24/7 ground alert) is projected to be $103.7 million for Fiscal Year 2010. That cost covers the manpower requirements for the mission at the Air National Guard bases currently selected by the North American Aerospace Defense Command. Of that $103.7 million, $12.5 million is funded in the Future Years Defense Plan for those units that were already executing a smaller version of ground alert missions before September 11th, 2001. The remaining amount of $91.2 million is the amount of money requested in the budget for fiscal year 2010 to continue the increased post-September 11th, 2001 alert requirement.

Question. General Newton, how is Operation NOBLE EAGLE different from the Air Sovereignty Alert mission?

Answer. The Air Force supports the commander of North American Aerospace Defense Command in the execution of the Operation NOBLE EAGLE and Air Sovereignty Alert (ASA) missions. ASA operations consist of ground operations that take place before fighter aircraft take off, including those activities that may take place after a unit receives an alert from North American Aerospace Defense Command but before the aircraft are airborne. Once aircraft take off, the ASA operation ends and becomes a homeland defense air mission under Operation NOBLE EAGLE.

MISSION TRAINING

Question. During a recent interview, several Army non-commissioned officers (NCOs) advised that they believe sub-standard soldiers end up in units and cannot be utilized, making it harder on that unit to accomplish its mission. In addition the NCOs indicated that some new recruits are unable to pass a physical readiness test. The NCOs feel that basic training course needs to be updated to provide the recruits skills they will need upon deployment to theater. Now that the Air Force is embracing a collaborative and supportive role in the types of operations being conducted in Iraq and Afghanistan, the Air Force training must meet the new mission requirements. Airmen need to be properly trained and ready for combat.

General Newton, please explain Initial Entry Training (IET) for Airmen. What are the basic skills that Airmen learn while at IET? What training is required beyond IET? Are Airmen coming to units fully trained to meet the needs for deployment or does training take place there as well?

Answer. The basic skills Airmen learn while at Initial Entry Training (IET) are designed to mirror an Air Expeditionary Force cycle; prep, train, deploy, and reconstitute. More specifically, M–16 trainer weapons are issued at the start of Basic Military Training (BMT) to reinforce the warrior identity. Airmen receive substantial warrior-expeditionary classroom training (e.g., Role of Warrior, Mental Prep for Combat, Combat Recovery, Basic Situational Awareness, etc.) and small field training rehearsal exercises with key classes taught during field training. In addition, Airmen gain knowledge on joint warfare, M–9 pistol, public relations and the media, information protection and the Code of Conduct.

In November 2008, BMT was lengthened by two weeks in order to incorporate additional expeditionary training through a concept titled "Basic Expeditionary Air-

man Skills Training" (BEAST). BEAST affords trainees a mentally, physically and skills challenging expeditionary experience, promoting trainee teamwork, responsibility, and leadership. Beyond IET, Airmen receive expeditionary training through a tiered training approach:

Tier 1: Foundational Expeditionary Skills Training: Airmen gain foundational expeditionary skills through accession venues and, to some degree, Initial Skills Training. Completion of this training alone does not produce a deployable Airman. Once an Airman reaches his/her unit they continue to build upon foundational expeditionary skills development.

Tier 2: Deployment-Ready Expeditionary Skills Training: Completion of this training is a requirement to maintain mission-ready status to produce a deployment-ready Airman, up to and including a major combat operation. All Airmen must complete tier 2 training.

Tier 3: Advanced Expeditionary Skills Training (Mission Specific): Training for *select* Airmen as determined by factors such as deployment location, threat assessment, specific mission, duty assignment, role, operation, or special requirement.

Tier 4: Advanced Expeditionary Skills Training (Expeditionary Center Assigned): Advanced training programs that are unique to a specific major command and/or functionally specific.

Question. General Newton, if an Airman is deploying to Iraq or Afghanistan, does he train with the same equipment he will use when deployed?

Answer. The Air Force is dedicated to providing Airmen with the appropriate training and equipment they need to accomplish the mission at home station and when deployed. In many cases, our Airmen train with the exact equipment they carry with them to their deployed location. This primarily includes Airmen expected to have significant exposure to the ground combat threat in their deployed environment. In other cases, though Airmen may not train with the exact equipment with which they will deploy, much of our equipment is pre-positioned at deployed locations so Airmen are issued identical equipment of the same type, make and model of that used for training immediately upon arrival—this saves on transportation costs. When identical equipment is unavailable, then similar equipment is issued—the differences are not significant and do not require additional training. We continue to implement strategies and improve our processes to minimize equipment and training inconsistencies.

Question. What sort of physical conditioning is done to prepare Airmen for deployment?

Answer. Pre-deployment physical conditioning includes unit physical training programs and personal fitness training programs. These programs include cardiovascular training such as sprint work, running, as well as using cardiovascular fitness equipment, such as treadmills, elliptical machines, and stationary cycles. Unit and personal physical training also includes a focus on muscular strength, muscular endurance, and agility conditioning using free weight equipment, weight machines, calisthenics, agility drills, and small fitness apparatus such as fit balls, jump ropes, and balance boards. Each Airman is assessed annually through a physical fitness test that includes a 1.5 mile run, push-ups, sit-ups and waist measurement.

Question. How is physical fitness maintained once the unit has deployed?

Answer. Physical fitness is maintained in a variety of ways, tailored to the environment and bed-down. In hostile environments, outside running is limited; therefore, fitness-related activities are conducted indoors. To support personal and unit fitness training, fitness facilities in many deployed locations have cardiovascular and strength conditioning equipment and fitness programs comparable to those available in garrison/home station. Depending on the location, unit mission and individual duty schedules, Airmen maintain their physical fitness through a combination of unit and/or individual fitness workout routines.

Question. How does the Air Force prepare for high altitude operations as those those will perform in Afghanistan?

Answer. The Air Force does not currently offer any specialized training to prepare members deploying to Afghanistan. It is an Airman's professional obligation to ensure they are physically fit and prepared for duty at all times. However, specialized career fields may have a specific requirement and training opportunities based on their unique mission as within the Special Operations, Para-Rescue or Tactical Air Control-Party.

[CLERK'S NOTE.—End of questions submitted by Mr. Murtha.]

WEDNESDAY, MARCH 18, 2009.

MILITARY PERSONNEL—ARMY

WITNESSES

HON. RONALD JAMES, ASSISTANT SECRETARY OF THE ARMY, MANPOWER AND RESERVE AFFAIRS

LIEUTENANT GENERAL MICHAEL ROCHELLE, DEPUTY CHIEF OF STAFF, UNITED STATES ARMY, G1

INTRODUCTION

Mr. MURTHA. We want to welcome General Rochelle, Deputy Chief of Staff of the Army for Personnel, and Secretary James, Assistant Secretary of the Army for Manpower and Reserve Affairs.

I just visited Ft. Carson and Ft. Benning. I got some pretty different views on what I get sometimes from up here in Washington, and so I'm looking forward to hearing your testimony and then asking some questions about some of the problems that they're having out in the field.

I know I think we got this stop loss thing worked out, at least Secretary Gates tells me he's going to make an announcement this week about it. We're going to take care of the problem down the road, and this year we are going to put the amount in the supplemental. The Subcommittee is already way ahead of the military on that issue. We're concerned about the stress that is impacting our Soldiers, and you just told me that by April of this year or next year, the 15-month deployments will end.

General ROCHELLE. We think all of our 15-month deployers will be back, the latest by June, Mr. Chairman.

Mr. MURTHA. Okay. Well, we welcome you to the Committee. Look forward to hearing your testimony. Mr. Young.

Mr. YOUNG. Mr. Chairman, thank you very much, and I just wanted to say welcome to our guests. We expect an awful lot out of our troops, and they have a right to expect a lot out of us, and so that is what we are here for. We are here to do whatever we can to support our troops. Thank you for being here today. Thank you, Mr. Chairman.

Mr. MURTHA. Can you summarize, and I understand the Secretary is the only one who will have a statement, is that right, or both of you will have a statement?

Mr. JAMES. Sir, we both have statements, but they will be very, very brief.

Mr. MURTHA. If you will summarize then, and we will get right to the questions, thank you.

SUMMARY STATEMENT OF SECRETARY JAMES

Mr. JAMES. Thank you, sir. Chairman Murtha and members of the Committee, I want to thank you for the opportunity to appear before you today, and I am particularly proud to be here with General Rochelle on behalf of America's Army and the 1.1 million men and women who are proudly serving our Nation around the globe.

As the Army is growing to meet today's demands, we are grateful to this Committee for the authorities, for incentives and bonuses that have helped us attract and retain the very best Soldiers. As the stewards of the Army's all-volunteer force, I am proud of this source and all of its accomplishments.

As I speak today, over 167,000 soldiers are currently deployed in support of the global war on terrorism. Soldiers from every State and territory, Soldiers from every corner of this country serve the people of the United States with honor and distinction. We are one Army with active and Reserve forces serving together around the globe. We are truly Army strong.

Our recruiting and retention success is directly attributable to the support gained from Congress. The most effective retention incentive for junior officers in fiscal year 2008 was the cash bonus. Over 94 percent of the 15,000-plus officers who took the incentive last year opted for the cash bonus. DoD analysis of the survey data showed that most officers intended to separate or were uncertain about staying in the service took the incentive and committed to further Army service.

We are committed to supporting our Soldiers, civilians and families, wounded warriors, recognizing critical contributions to the all-volunteer force. To maintain a high standard of living, the Army is caring for Soldiers and their families through several initiatives, which include the Army soldier family action plan, Army family covenant, as well as the transportability and transferability of portions of the GI benefits to family members.

We have, on direction of the Secretary of the Army and the Chief, implemented a new suicide intervention program, including but not limited to a stand-down for the entire Army. Even one suicide is too many. We are grateful to the Congress for your concern and attention paid to soldiers.

I ask you for your continued support to encourage all who are qualified to answer the Nation's call to duty, and once again thank you for the opportunity to appear before this Committee today, and I look forward to a dialogue and answering your questions, sir.

Mr. MURTHA. General Rochelle.

SUMMARY STATEMENT OF GENERAL ROCHELLE

General ROCHELLE. Thank you, Mr. Chairman, distinguished members of the Committee. I will summarize my oral statement and ask that the joint written statement on behalf of Mr. James and myself be accepted for the record, and I will summarize my oral statement with 3 points.

First of all, I am deeply honored to, once again, appear before this committee representing the men and women of the United States Army. They are proud, they are strong, and they are proud and strong largely due to the phenomenal support that this com-

mittee has ensured America's Army has received in the appropriations side, most especially for the care for our wounded. On behalf of those wounded men and women, several of whom we hosted in the Pentagon last Friday, I say thank you to the members of this Committee.

I look forward to your questions.

[The joint statement of Secretary Jams and General Rochelle follows:]

JOINT STATEMENT BY

HONORABLE RONALD J. JAMES

ASSISTANT SECRETARY OF THE ARMY, MANPOWER AND RESERVE AFFAIRS

AND

LTG MICHAEL D. ROCHELLE

DEPUTY CHIEF OF STAFF, G1

UNITED STATES ARMY

BEFORE

HOUSE APPROPRIATIONS COMMITTEE - DEFENSE

HOUSE OF REPRESENTATIVES

FIRST SESSION, 111TH CONGRESS

MARCH 18, 2009

NOT FOR PUBLICATION

UNTIL RELEASED BY THE

HOUSE APPROPRIATIONS COMMITTEE

Introduction

Chairman Murtha, Ranking Member Young, Distinguished Members of this Committee, thank you for the opportunity to appear before you on behalf of America's Army. We have no greater heroes than America's most precious resource – our Soldiers. These Soldiers, their Families, and wounded warriors backed by our civilian workforce, represent the very best of America's values and ideals. Your continued support of our personnel initiatives provides the tools to ensure the growth, sustainment, and well-being of our All-Volunteer Force. This fighting force of 1.1 million Soldiers is continually tested at home and abroad. Repeatedly our Nation's young men and women step forward and pledge to serve. They recognize the challenges facing our Nation, answer the call, and become part of something larger than themselves. Their dedicated service and sacrifice are deserving of the very best services, programs, equipment, training, benefits, life-style, and leadership available. Our focus this year centers on the growth and sustainment of the force, our ability to meet the national challenges, and the importance of maintaining this strength to meet the demands now and for the future.

Recruiting and Retention (Officer and Enlisted)

Despite the challenges of a protracted conflict in fiscal year 2008, the Army exceeded its enlisted recruiting and retention missions for the first time since fiscal year 2002 and is optimistic it will meet its goals for fiscal year 2009.

The Army's percentage of new enlisted Soldiers considered "high quality" with a Tier 1 education (high school diploma) who score in the top half of the Armed Forces Qualification Test (AFQT) increased by 2.1% in 2008. Additionally recruits who scored highly (50-99%) on the Armed Forces Qualification Test (AFQT) increased 1.6%; and recruits who scored poorly (30% and below) on the AFQT decreased 1.2%.

To achieve overall manpower levels in fiscal year 2009, the Active Army must retain 55,500 Soldiers, the Army Reserve must retain 11,619 Soldiers, and the Army National Guard must retain 34,593 Soldiers. The Army is on track to meet its retention mission for fiscal year 2009. As of February 2009, the Active Army achieved 152% of its year-to-date mission, the Army Reserve achieved 125% of its year-to-date mission, and the Army National Guard achieved 112% of its year-to-date mission.

Retention of combat experienced veterans is imperative to current and future readiness. Our Army has achieved success in this area as well. Currently, 45% of all reenlistments occur in the theater. Recently deployed units or units currently deployed to these areas of operations have reenlistment rates of 140% of their annual goals.

The officer shortage in the Army continues to keep the officer corps out of balance. To assist in this area, the Army initiated the Captains' Retention Incentive Menu in September 2007 with the intent to recruit, retain, and manage critical skills to increase the retention of lieutenants and captains for three years. The program ended in November 2008. The Captains' Retention Incentives Menu included three options: a cash option based on the officer's accessed branch in exchange for a three year non-concurrent active duty service obligation, the Expanded Graduate School Program which funds graduate school, or the year-long Defense Language Institute with both of the latter producing a 3:1 active duty service obligation. The Army spent $443M in fiscal year 2007 to 2009 on the Captains' Retention Incentives Menu. Captain retention increased in FY 08 to 89.1% over the ten year average of 88%. The Menu guaranteed retention through fiscal year 2011 for over 16,000 of the 23,000 captains who were eligible to participate. The timing of our Captains' Retention Incentives Menu program, concurrent with the dramatic downturn of the economy and job market, helped support our retention goals.

The Officer Accession Pilot Program (OAPP), launched in the 2006 National Defense Authorization (NDAA), introduces three options for officer accessions incentives: Option Alpha, Option Bravo, and Option Charlie. Option Alpha provides a $5,000 bonus to students who graduate from the Leader Training Course (LTC) and

contract as a 2 year ROTC cadet. The fiscal year 2008 contract rate for graduates from the LTC was 70%. That is a 5% increase from the 65% contract rate average the previous four years. Option Bravo provides an incentive of up to $250 per month to newly contracted ROTC cadets who successfully complete a course in a language on the Critical Language List. At a cost of $68,250, the program had 127 participants as of Cadet Command's January quarterly report. It is too early to measure the precise impact of the OAPP programs for fiscal year 2008; however Cadet Command communicates a noticeable increase in interest in the LTC and expects significant increases for fiscal year 2009. Option Charlie authorizes clergy and medical professionals with skills that are critical to the Army between the ages of 43 and 60 appointed as Army Officers with a two-year Military Service Obligation (MSO) as opposed to the normal statutory six-year MSO.

The United States Military Academy and ROTC Pre-Commissioning incentives – Post or Branch of Choice or Graduate Schooling – with 4,500 hundred participants in fiscal years 2006 to 2008, have increased out-year retention by 40% for newly-commissioned, high-performing USMA and ROTC officers.

The single most effective retention incentive for junior officers was the cash bonus. Over 94% of the 15,000 plus officers who took incentives in fiscal year 2008 elected to take the cash bonus. Department of Defense analysis of survey data showed that most officers who intended to separate or were uncertain about staying in took the incentive and committed to further obligated Army service.

We believe that equally important to financial incentives in effective retention is the assurance that Soldiers and their Families will be cared for in a manner commensurate with their service and sacrifice. In the event of a life changing injury or the loss of life, our Soldiers are assured that their Families will receive financial and programmatic benefits commensurate with their service and sacrifice. This support includes full-earned benefits and disability compensation and a streamlined process for accessing them.

The Army's programs have been effective in recruiting and retaining both Officers and Enlisted Soldiers with critical skills. For Enlisted Soldiers, the Selective Reenlistment Bonus (SRB) and Critical Skills Retention Bonus (CSRB) have proven to be effective tools for precision fill of critical skills. The Military Occupational Specialty (MOS) 09L program is an interpreter/translator pilot program used to recruit individuals possessing critical language capabilities needed for the Global War on Terrorism. To date, the Army has recruited more than 1,400 Soldiers as military interpreters and translators under the MOS 09L program.

The continued funding of these programs by Congress is absolutely critical to the Army. Without these initiatives to assist in shaping the force, the Army will experience a detrimental shortfall that would take years to overcome.

Civilian Personnel

Civilian personnel are critical to our fighting force and our recruiting and retention efforts must include this segment of our population. More than ever, Army civilians are a critical component of readiness. Army civilians deliver combat support and combat service support at home, abroad, and on the battlefield. Currently, the Army's Civilian Corps is over 313,000 strong. Of those, over 4,000 are serving in harm's way in the U.S. Central Command Area of Operations.

The new Department of Defense Civilian Expeditionary Workforce supports humanitarian, reconstruction and, if necessary, combat-support missions. As a key part of the Army Civilian Corps, the civilian expeditionary workforce will maximize the use of civilian employee volunteers in support positions, freeing up military personnel for operational requirements. These civilian employees will be trained, equipped, and prepared to mobilize and respond urgently to expeditionary requirements in support of humanitarian, reconstruction, and, if necessary, combat-support missions.

To take full advantage of our civilian workforce's potential, the Army is developing a comprehensive civilian competency management system (CMS). The CMS will establish competency-based career paths and guides for use by supervisors

and employees in determining training and developmental needs for career planning. Once fully implemented, CMS will greatly improve the Army's capability to strategically plan civilian development consistent with validated current and future competency requirements.

The Army Civilian University (ACU) was created to improve integration between the civilian and military workforces by establishing a common military and civilian culture. ACU will include integrated and complementary curricula and a more standardized, competency-based approach to civilian functional training, education, and leader development. The ACU will prepare civilians for new demands and fully engage the Army in meeting the objectives of the Department of Defense Civilian Human Capital Strategic Plan. The goal is to ensure civilian training develops the skills needed to support the Army at all levels.

The Department of Defense Base Closure and Realignment Commission (BRAC) process is currently affecting the civilian workforce. The Army has multiple programs in place to assist the civilians assigned to the bases subject to closing and realignment. One such program offers reassignment to a position at a new location with full Permanent Change of Station costs. We are taking maximum advantage of all internal assignment and transition services available to support employees affected by BRAC.

To protect public interest and maintain core competencies, we ensure that inherently governmental requirements and requirements that are closely associated are performed by government employees. The civilian workforce provides us with an opportunity to save vital resources by bringing relatively expensive contracted services back into the government through the in-sourcing process. The initial results of our efforts are promising, saving an average of $48K per position in-sourced. To date, we have in-sourced 1383 positions to date.

Stop Loss

The Army's recent use of stop loss is based solely on mission demands. Our intent is to discontinue stop loss on a comprehensive level as soon as operationally

feasible, consistent with Department of Defense policy. The department appreciates Congress providing the flexibility and authority to compensate members who are affected by stop loss, as this pay serves as an interim measure to help mitigate the impact of stop loss on the individual Soldier.

Individual Ready Reserve Mobilization

The Individual Ready Reserve (IRR) is a critical element that assists the Army in meeting unit readiness. There are 64,556 Soldiers in the IRR as of 31 December 2008. 12,816 IRR Soldiers received involuntarily mobilization orders since September 11, 2001. 8,953 IRR Soldiers were deployed to Iraq or Afghanistan at least once. The Army has a tiered systemic approach to mobilization to ensure we input equity into the IRR mobilization process. The key is to continuously ensure IRR Soldiers understand their obligations, have access to the latest in benefits and support, are provided ample time to adjust their personal affairs prior to mobilization, are trained appropriately, and have the opportunity to request a delay or exemption if warranted.

Based on lessons learned concerning the readiness of this population, the Army remains in contact with IRR Soldiers. Mechanisms begin with an IRR Welcome Letter and Orientation Handbook sent approximately 30 days after entrance to the IRR. Career Managers maintain contact with IRR Soldiers through routine emails and phone calls. Approximately 5 months after entering the IRR a Soldier will be ordered to muster. Soldiers may be required to muster each year they remain in the IRR. Once mobilized, Soldiers in the IRR receive 10 days of Individual Soldier Training upon arriving at the mobilization station. These Soldiers also receive refresher training in their military occupational specialty (MOS) which lasts between two to four weeks depending on their specific skill.

Well-Being

To maintain a high standard of living, the Army is caring for Soldiers and their Families through several initiatives. These initiatives include the Army Soldier Family Action Plan and the transferability of portions of GI Bill benefits to family members.

The Soldier Family Action Plan (SFAP) is the roadmap by which the Army fulfills its commitment to Soldiers and Families. It reaffirms the Army's commitment to Families and builds on recent investments in people, programs and infrastructure. The SFAP details approximately 112 tasks, along with supporting actions and milestones, to improve support to Soldiers and their Families. The Army leadership made a down payment by transferring $100 Million into existing Family Programs in fiscal year 2007. These funds are being used to hire family readiness group assistants, expand availability of child care and reduce cost, provide additional respite care for Families with special needs, and enhance morale and recreation programs across the Army. Funding supports four major programs - Army Community Service, Child Care Services, Youth Services, and Soldier and Morale, Welfare and Recreation Services.

U.S. Army Wounded Warrior Program

Taking care of wounded warriors is an important part of the Army's mission. The Army Wounded Warrior Program (AW2) is the official U.S. Army program established after 9/11 that assists and advocates for severely wounded, injured, and ill Soldiers and their Families, wherever they are located, for as long as it takes. AW2 provides individualized support to this unique population of Soldiers, who were injured or became ill during their service in the Global War on Terrorism. AW2 is a key component of the Army's commitment, the Army Family Covenant, to wounded warriors and their Families. All wounded, injured and ill Soldiers—who are expected to require six months of rehabilitative care and the need for complex medical management—are assigned to a Warrior Transition Unit (WTU) to focus on healing before returning to duty or transitioning to Veteran status. Those who meet AW2 eligibility are simultaneously assigned to the AW2 and receive a local AW2 Advocate to personally assist them long term. Wounded Soldiers are eligible for a wide array of benefits in order to help them recover physically, prepare financially and build their skills for a rewarding career. Today, 120 AW2 advocates located in communities across America at major military installations, military treatment facilities and VA facilities provide personalized support to over 4,000 Soldiers and their Families.

Army Equal Opportunity (EO) Policy

The Army's Equal Opportunity (EO) policy directs and sustains a command effort to maximize human potential and ensure fair treatment for all persons based solely on merit, fitness and capability in support of Army Readiness and National Security. The Army leads the Nation in Equal Opportunity using education, training, cultural awareness and prevention of discrimination. Commanders at all levels are responsible for sustaining positive equal opportunity climates within their organizations.

The Army is currently transforming EO policy through an infusion of equal opportunity techniques, tactics and procedures into the full spectrum of Army Operations, Institutions and Training base, thus enhancing the foundation of the Army's overall Human Relations program. The Army is currently upgrading the Equal Opportunity Reporting System (EORS). The EORS tracks complaint data and trends to give senior leaders critical information about the EO climate in their organizations and across the Army and it will soon provide a variety of automated reports,. The Army is preparing to implement the Defense Equal Opportunity Management Institute (DEOMI) Organizational Climate Survey (DEOCS) as its official command climate survey for the Army.

Sexual Assault

The Secretary of the Army and the Chief of Staff remain personally involved in reinforcing to all Soldiers and leaders the importance of preventing sexual assault. Under their guidance and leadership, the Army launched a new comprehensive sexual assault prevention campaign in 2008. The campaign centers on leaders establishing a positive command climate where sexual assault is clearly not acceptable. The campaign further encourages Soldiers to personally execute peer-to-peer intervention and to not tolerate behavior that, left unchecked, may lead to sexual assault.

The cornerstone of the Army's prevention campaign is the "I. A.M. Strong" program where the letters *I, A, and M* stand for Intervene – Act – Motivate. The "I. A.M. Strong" program features Soldiers as influential role models and provides peer-to-peer

messages outlining the Army's intent for all its members to personally take action in the effort to protect our communities. Leaders are already embracing "I. A.M. Strong" initiatives and motivating Soldiers to proactively engage and prevent sexual assault. The "I. A.M. Strong" campaign will extend through 2013 and will include assessments tools to measure its success, including what we expect to be decreases in incidents of sexual assault.

Another key initiative is a comprehensive effort to increase the ability of our Criminal Investigation Command and Judge Advocate General Corps to investigate and prosecute sexual assault cases. This initiative includes additional investigators and prosecutors at our busiest jurisdictions, resulting in a capability similar to civilian Special Victim Units.

The Army continues to emphasize victim services and response capabilities. We continue to fully resource an Army-wide victim advocacy program led by Sexual Assault Response Coordinators and supported by a cadre of professional Installation Victim Advocates who interact directly with victims of sexual assault and other response activities, such as medical, legal, law enforcement, and chaplains.

In addition to the "I. A.M. Strong" campaign, we are continuing to assess, refine, and improve our Sexual Harassment/Assault Response Program (SHARP) under the leadership of The Deputy Chief of Staff, G-1.

Suicide Prevention Program

The loss of any Soldier is a tragedy, particularly when it could have been prevented. Over the past several years, suicides among Soldiers have increased. Army leaders are greatly concerned with the significant increase in the number of suicide cases. The Army leadership has prioritized efforts and resources toward suicide prevention awareness, suicide intervention actions, and post-intervention grief and bereavement support.

General Pete Chiarelli, Vice Chief of Staff of the Army (VCSA), was recently assigned overall responsibility for the Army Suicide Prevention Program. On February 10, 2009, the Army ordered a "Stand Down" and a three-phase program focused on suicide prevention. During this program, Commanders and first line supervisors engage their Soldiers and Civilians to understand the individual suicide risk factors and warning signs and how to take action to intervene. The centerpiece of Phase I is an interactive video called "Beyond the Front." Between February 15 and March 15, 2009, all Army personnel – Soldiers and Civilians – will watch the video in small groups and make decisions on how to react to the video's vignettes. Phase I also features the ACE (Ask, Care, Escort) intervention card, used to explain how to help a "buddy" who may be exhibiting warning signs of suicidal behavior. Phase II, a chain teaching phase occurring between March 15 and July 15, 2009, again utilizes a video and vignettes based on various phases of the deployment cycle. This phase focuses on improving recognition of warning signs and how to intervene. Phase III, sustainment, will continue indefinitely through annual training requirements.

These efforts build on the Army Suicide Prevention Program (ASPP) General Officer Steering Committee (GOSC) established last year and chaired by Army G-1, Chief of Chaplains and the Surgeon General. This multi-disciplinary forum also includes Army researchers, behavioral health professionals, legal professionals, law enforcement professionals and chaplains. GOSC prevention strategies include raising awareness and building intervention skills, improving access to comprehensive care, and reducing stigma associated with behavioral health care and improving life skills.

The Army Chaplain Corps and the Army Medical Command are working together to develop and implement programs that address the stigma associated with seeking help and hiring additional behavioral health providers to improve access to care.

The Army recently entered into an agreement with the National Institute of Mental Heath for a five year longitudinal study of suicide. The Army will serve as the largest

living lab to assess factors affecting suicide, training efforts for reduction of suicide and other associated mitigation efforts.

The Army continues to meet regularly with external agencies such as the Departments of Veterans and Health and Human Services (including the Centers for Disease Control and Prevention and the Substance Abuse and Mental Health Services Administration) in a collaborative effort to exchange information and strategies designed to reduce suicide.

Army Substance Abuse Program

The well-being of our Army is affected by alcohol and drug abuse and the Army is committed to its elimination from our ranks. The Army Substance Abuse Program (ASAP) is a command program emphasizing readiness and personal responsibility. The ASAP uses prevention, education, deterrence, detection, and rehabilitation when necessary to reduce and eliminate alcohol and drug abuse.

A team is currently deployed to US Army Forces, US Central Command to determine methods to deliver substance abuse services in theater. To support our Commanders, we are developing portable prevention education packages for deployed Soldiers, Soldiers at home, and reserve components.

Retirement Services

Retired Army Soldiers are a unique group of American heroes who have dedicated a lifetime of selfless-service and sacrifices toward preserving the very freedoms that have made this the greatest country in the world. No one is better equipped to tell the Army story than those who have lived it. As such, the Army continues to rely on their positive influence worldwide on military installations and within their communities.

Many of these retired Soldiers have joined the ranks as civil servants and continue to make our Army strong by sharing their wisdom and knowledge. Others

volunteer their time providing much needed care to our wounded warriors and their Families.

Setting Conditions for the Future: Developing Force Structure

Providing Forces to combatant commanders to meet current and future challenges will continue to be priority number one. The agile Army Human Capital Strategy (AHCS) addresses these challenges by creating a road map to restore balance to the Force by fiscal year 2011 and by continuing to develop force structure through 2024. The objective of the AHCS is to secure and sustain the All-Volunteer Total Army, resourced through efficient and cost-conscious practices. The AHCS strategy is based on principles that assure a higher quality, more diverse and ready Total Army enabled by effective HR systems and agile policies and programs.

Congressional Assistance

Recruiting, retention and providing for the well-being of the best Army in the world requires a significant commitment by the American people. The Army is grateful for the continued support of Congress for competitive military benefits and compensation along with incentives and bonuses for Soldiers and their Families and for the civilian workforce. These are critical in helping the Army be the employer of choice.

The Army also thanks Congress for the new legislation, section 618 from the 2009 NDAA, which gave the Army the ability to consolidate special pay, incentive pay and bonus authorities, ensuring the Army has the necessary flexibility to direct programs at specific needs.

Conclusion

We need to maintain the current level of investment to ensure a robust and high-quality Force. The well-being and balance of our Force is absolutely dependent upon your tremendous support. The Army is growing and transforming in a period of

prolonged war. We will do so with young men and women of the highest caliber whose willingness to serve, even in a time of protracted conflict, is a credit to this great Nation.

BODY ARMOR

Mr. MURTHA. Well, let me start off. We have a few people here so a couple of things that I found and I just want to make it clear. I went to Ft. Carson and asked to meet with 12 enlisted people and I went to Benning and did the same thing.

Almost unanimously, the first complaint was the heaviness of the armor, and this committee's been concerned about the armor being so heavy for a long time. I know you are working on it. At Carson, they were almost willing to do without armor because in Afghanistan in particular, they felt like it was so cumbersome. One woman said she will have a handicap the rest of her life because the armor is so heavy that it jammed her spine. That is only one story. There are a lot of people who have been saved because of the armor, but that was the single biggest complaint that I got with both places.

LENGTH OF DEPLOYMENTS

The second complaint was the length of the deployments and the fact that they didn't have enough dwell time. And I know we have talked about this over and over again, and rightly you say about this committee, there is no question we have done everything we could. When Bill Young was chairman, when Jerry Lewis was chairman, we have always worked in a bipartisan way to make sure the troops had what they needed, and we have added billions of dollars to the budget to make sure that you had what you needed. Even though in many cases there was inadequacy when you started out, you didn't have the equipment you needed, and we made sure we put it in and got it out there.

MRAPS

MRAP is a perfect example. Now, I had some complaints about the MRAP is not working well in Afghanistan and I know they are not working well in Afghanistan, because there are no roads. I found out there is no railroad at all in Afghanistan, which surprised me. So we have obviously got a lot of problems that are different in Afghanistan than anyplace else.

UNIFORMS

The other thing that came up in Benning and not in Carson is that the uniforms are completely inadequate, not only the ones who are wearing them not only the 12, 13 enlisted people I talked to, but also the sergeant major agreed that the uniforms were inadequate.

QUALITY OF THE FORCE

The other thing that every one of them complained of—they are all NCOs—the quality of the force—you say you have increased the recruiting, but the quality of force is less than it should be. We are taking people in who are inadequate. High school graduates are down. They mentioned physically not fit, and when they finish basic school they are not fit. I am telling you what they told me.

I know I saw some figures where it is a little bit better than it was last year, but what worries me is we are going to get back to the same situation in the seventies and eighties where we had to

get rid of a lot people that were inadequate and then rebuild the whole Army and then the long term consequences of taking people who are inadequate means they are going to have more PTSD. We are going to have more health problems down the road. There are going to be more emotional and physical problems for the military, and it is going to be a lot more expense for the military.

DISTRIBUTION OF BONUSES

The bonuses have always been a bone of contention with me. I always think people enlisted in the military in order to defend this great country, to serve this great country. The bonus program is up over $1 billion now. I think the only service giving bonuses now is the Army. I think all the rest of them have quit doing it.

But the balance you should look at because they are saying that the enlisted people getting in, in some cases, getting more than the ones who have been in combat and reenlisting. I don't know if that is true, but that is what some of these folks said. So I would appreciate if you would give the committee a report on how you distribute the bonuses and how that works.

[The information follows:]

The Army allocates bonuses based on Army requirements, the strength and criticality of the skill, and the recruiting or retention difficulty with the particular Military Occupational Specialty (MOS). Some specialties are extremely difficult to recruit but are more easily retained; in addition, more senior noncommissioned officers (NCOs) tend to stay until retirement without cash bonus incentives. As a result, it is entirely possible that a new recruit may have a higher bonus than a Soldier in a higher pay grade in the same specialty. Bonuses are used only as needed to fill MOS vacancies at the skill level needed. NCOs with over 10 years of service have a higher tendency to reenlist than those with less than 10 years of service or Soldiers serving on an initial term of service and thus typically receive little or no bonus money. The necessity to manage the force, by MOS and level of responsibility requires a detailed process that is further impacted by outside factors such as the economy, quality targets, and ongoing global mission requirements.

All enlistment and reenlistment bonuses are evaluated at a minimum of once per quarter. Each MOS is scrutinized by level of responsibility to determine if an enlistment or reenlistment incentive is necessary to attain MOS targets that support readiness and mission requirements. In January 2009, the Army achieved its authorized end strength and bonuses were reduced in order to stay within authorized strength ceilings. Currently, only 45 of 161 entry level skills have a bonus for new recruits. The Army anticipates further bonus reductions based on the economy and the demonstrated increased propensity to enlist or reenlist.

EQUIPMENT

One other thing they talked about: night vision goggles. They say the 14s are much better than the sevens and that most of the people only have the sevens. M–4's are unreliable. Now, I heard two stories about the M–4s and the M–16. One is that it was unreliable from all the troops there, and they were unanimous down at Benning about that, but the sergeant major said they just don't clean them. I don't know—I don't know about that. I don't know what the problem is but each—all the enlisted people were upset about the M–4 which I have heard so much about when they first deployed it.

They all said the equipment that they train on is not the same equipment that they have when they go to combat. They have to be retrained on different equipment when they go to combat. They say resupply in Afghanistan is horrible. Soldiers have limited

training time between missions because of ammunition shortages. That is what these 12 people are telling me.

A unanimous comment was that the POR, which is the counseling they get before they go overseas, should be extended to the families. They thought because there is so much more money they are making overseas and some of the families spend it, and then when they come home, the money's not available, and they were pretty unanimous about that the families ought to all have the same support.

But those are basically what I found and I would be interested in hearing not necessarily—well, in hearing from either of you about the complaints that I have gotten from people. I didn't pick them. You folks—you know, your folks gave me the NCOs that I talked to.

General ROCHELLE. First of all, thank you, Mr. Chairman, for the opportunity to comment on a number of those and I will.

First of all, we can always count on our great Soldiers, men and women to tell it just like it is. That is one reason why the American people respect them so highly and that respect has continued, if not risen. It has continued very solidly.

On the aspect of armor, the Chief of Staff for the Army, the Sergeant Major of the Army, the Secretary of the Army, the weight of the armor, that is, have heard the same plea from our Soldiers, and as you stated in your comment, we are looking at that to try to lighten it without of course jeopardizing safety for our soldiers at the same time.

We clearly know that the length of deployment on the second point, if I may, the length of deployment is longer than our Soldiers would like them to be. This Committee fully understands that that is a function first and foremost of the demand for Army boots on the ground around the globe, not just in the OIF and OEF theaters of war.

The Chief just this morning mentioned that he was receiving from Special Forces Soldiers in particular comments, adverse comments or negative comments on the uniform and we are looking at that.

But the final point I would like to make is, perhaps, in my estimation, the most critical one certainly for this Committee, and that is the quality of the force. We can measure the quality of the force in multiple ways and there is an ongoing, and has been an ongoing, debate in my more than six years involved with recruiting with accessioning and now as the Army G1. You can measure it on the front end by the somewhat abstract notions of high school degree completion, one to three A, whether they score in the upper middle category of the same Armed Services vocational aptitude battery Elvis Presley took, or one can measure it on the output side, once completed training, notwithstanding the comments of non-commissioned officers that you mentioned, Mr. Chairman.

I submit two points in closing. One, that the quality of the force has really never been better because every young man or woman who raises his or her hand today realizes that they are doing so with almost a certainty of going into combat in today's environment.

The second point and final point is simply that when we take a look at how these young men and women are stepping forward, less than one percent of American society, according to the Census, fewer than one percent, we should give them credit not only for that as an aspect of quality but for their patriotism. I think my comment also, in some ways, alludes to your discussion earlier, Mr. Chairman, about bonuses and incentives, with only three out of ten young people eligible to serve today without a waiver, once again, it is a question of supply and demand and that demand is Army boots on the ground.

ATTRITION RATE

Mr. MURTHA. The only thing I would add to my comments was the fact that your attrition rate has dropped significantly in the basic training, which means you're either keeping people in that should—traditionally you lose 14 or 15 percent. It is down to 8 percent. So I think you need to look at this. I know General Casey is out in the field. You are out in the field. But you really need to sit down with these young NCOs and find out how serious is this problem of quality because in the end, we are all going to pay a heavy price if the quality has dropped.

No question about it, you folks do a marvelous job. All of us have the greatest respect for the people in the military. I am inspired by the families and the people who are serving, but that doesn't mean we don't have to continue to look at the quality. So you need to take a look at it.

General ROCHELLE. Wise counsel, Mr. Chairman, and your numbers are correct in terms of historical attrition and current rates of attrition and I acknowledge that.

Mr. MURTHA. Mr. Young.

OFFICER RETENTION

Mr. YOUNG. Mr. Chairman, thank you very much. I think the Army's to be congratulated on the ability to reach your end strength, your increased end strength, and I think it is important that the issues that Mr. Murtha has mentioned, I think we all agree those are areas of concern to us, and I am satisfied they are to you as well.

But as the Army grows and you maintain your retention and recruitment goals for enlisted personnel, where do we stand with officers? I mean you have got to have your officer you have to have your leaders and I am just wondering I am hearing that there is a little bit of a problem in the Army retaining officers. Could you comment on that, sir?

General ROCHELLE. I would be happy to comment on that, Ranking Member Young. The Army's shortfall in officers is first and foremost attributable to modularity which increased the total requirements for officers. The most significant point I would like to make is that our ten-year average for officer retention remains unchanged. We are not hemorrhaging officers. We have some small specialties where we are challenged in retaining that higher average rate among those being aviation for which there is a significant demand. Significant demand and a significant growth I might add.

In recent years, however, we have increased our officer retention through, as Mr. James mentioned in his oral statement, an officer selection critical skills retention bonus. Over 15 thousand officers agreed to retain with the Army out beyond to fiscal year eleven as a result of that program. I think our officer requirements are reasonable given a modular force. I think our retention rates are extraordinary given the stress that our total force is under.

Mr. YOUNG. And General, you had a program that expired in November of 2008 called the "captain's retention incentive menu pilot program." Is that why you have been successful in retaining officers?

General ROCHELLE. That is the—officer critical skills retention bonus by another name that I just addressed, Representative Young. That is one of the factors. One of the other factors, of course, and we don't want to misconstrue this nor give it an insignificant level of emphasis. Army officer just like Army non-commissioned officers are exceedingly proud of what they are contributing on behalf this Nation today and more than anything else that represents the reason why our retention rates remain at high levels. I would also like to just comment, though, that the captain's retention bonus that you referred to or the officer critical skills retention bonus did yield us 15,000 officers who are going to stay with us beyond fiscal ten and the authority for that program was given to us by the Congress as a pilot authority to allow us to apply innovative techniques to be able to for both officer and enlisted retention, a critical capability, sir.

Mr. YOUNG. Why do we allow it to expire?

General ROCHELLE. Sir, we actually hit the number that we were able to, the population that we were targeting in captains, we don't think that we will need that going forward.

ROTC PROGRAMS

Mr. YOUNG. What about ROTC programs? I understand that most of your officers come through ROTC as opposed to going to the Academy. That is accurate, isn't it?

General ROCHELLE. That is accurate, Representative Young.

Mr. YOUNG. Are the ROTC programs as robust today as they need to be?

General ROCHELLE. Interestingly, I had a session with two outstanding RAND analysts yesterday on this very subject, a fairly lengthy session with them. For the foreseeable future, we will continue to receive most of our officers, the majority of our officers as you said, through the Army ROTC program. We do find that we are not receiving what we are looking for in terms of the diversity from that program, both in terms of ethnicity, language diversity, et cetera, and the Congress once again has given us some pilot authorities there with which we are exercising aggressively.

We will continue to receive the majority of our officers from the Army ROTC program. We are studying whether or not, with the help of RAND, whether those programs are located geographically speaking, optimally, to be able to give us the talent and the officers we need for the future, diversity being one of the factors.

Mr. YOUNG. I would like to give you something to think about and offer an invitation. A couple of years ago, we established a pro-

gram at the University of South Florida because we have Army ROTC, Air Force ROTC and Navy ROTC. In view of all of the joint activities that we have seen in recent combat, with all of the services working together and actually putting sailors and airmen on the ground as infantry, we started this program of having joint training to teach the ROTC students how they would work together in a joint operation and it worked very well, and one of the incentives was the fact is we were so very close to MacDill Air Force base with central command and Special Operations command, and those folks are very, very helpful and very cooperative, and they really like the program.

I would like to invite you to come take a look at it. I think you would be impressed with what this is doing, not only to maintain the spirit of the ROTC students but also to give them a great understanding of the importance of working together. I know when we stood this up, I spoke to the assembled crowd and said look, it is really important that you maintain the pride of your service and the identity of your service, but it is also important to understand you guys have to work together when you get into the battle, you are going to be working together. Well, I can suggest that you take a visit there and if you need something else to do while you are there, you have MacDill Air Force Base, Central Command and Special Ops. So I think you would be impressed with this program.

General ROCHELLE. I will pay it a visit.

Mr. YOUNG. Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Dicks.

COMPREHENSIVE SOLDIER FITNESS EXAM

Mr. DICKS. Thank you, Mr. Chairman. I want to talk a little bit about the increase in the suicide rate. The figures were released recently, January. The new figure of more than 128 compares to 115 in 2007, 102 in 2006 and is the highest since recordkeeping began in 1980. The Army's report calculates to a rate of 20.2 per 100,000 Soldiers, which is higher than your adjusted civilian rate for the first time since the Vietnam War.

In addition to the suicide data being released, the Army has plans for units to conduct a stand-down within a 30-day window between February 15th and March 15th, 2009. The stand-down will include training for peer level recognition of behaviors that may lead to suicidal behavior and intervention at the buddy level. The stand-down will follow, will be followed by a chain teaching program focused on suicide prevention from March 15th to June 15th, 2009.

Can you give us a little—can you explain what the Army is trying to do here?

Mr. JAMES. Yes, sir. The Secretary and the Chief of Staff have insisted that the entire enterprise, that the entire Army, get involved in the stand-down in order to raise awareness. In addition to that, the Vice Chief of Staff has been put in charge of the senior review group to take a look at this. In addition to that, the Surgeon General has been developing what we call a physical health exam that takes into account the mental side of these issues. It is called a Comprehensive Soldier Fitness Exam. Clearly, suicide is some-

thing that we need to learn more about. We need to do better in this regard.

We have contracted with the National Institutes of Mental Health to do a longitudinal study to take a look at some of the other underlying causes or at least get better understanding about how we can be more effective in intervening early. How we can, in fact to use my previous life's jargon, how we can get the frontline supervisors, the sergeants, the battle buddies, the specialists, in fact, to be aware and to also to get the families to be sensitive to the issue about how to identify the warning signs because we are convinced that this is a public health tragedy. It is an issue that can be prevented, and the Army is aggressively taking steps to do this, and we have not done enough. We plan to do more, but I would be happy to invite General Rochelle to give any additional comments.

Mr. DICKS. Can I just add one point, does the Army believe this is a crisis or not?

Mr. JAMES. The Army believes that this is unprecedented, and the reason why I am not going to respond to that because, as we have looked at this, we have tried to figure out whether there is a correlation between multiple deployments. As we have looked at these we have been trying to find trends, and basically the kind of trends we have found is issues like financial issues, marital issues, divorce issues, relationship issues. Are deployments a factor? I cannot sit here and tell you that the deployment is the but-for factor. We hope that the National Institutes of Mental Health can, in fact, help us get the answers so that we can make policy decisions based not on my speculation but based on some factual information and from public health experts.

Mr. DICKS. We understand this is a very sensitive matter, and I think the Army takes it very seriously. I know out at Ft. Lewis and Madigan, I know they take it very seriously, and it sounds like these sessions that you are going to have over the next few weeks will help. You know, it seems to me that we ought to keep talking to General Chiarelli about this, but we ought to be looking at other possibilities and doing pilot projects.

Our Committee provided resources last year and we find that they are using yoga and they are using Reiki and they are using this and that, but trying to let the troops go online to get help if they felt they needed it, or is this especially for the Guard and Reserve where they don't have—they don't come back to a place and they disband and go back into the community—might be something that—and we have had outside people come in and talk to us about this. But you know, we have to go through all the competitive rules and all the other things that are and it takes quite a long while to get, to finally ever get something done.

And we had General Sutton in here the other day and everything seems to be a study, and you know, when the people are losing their lives, I just hope there is, and I know and I am certainly not putting any of this on you all, but to me, there needs to be a sense of urgency here, and if there are options that haven't been utilized or considered, let's do pilot programs, let's at least look at these things to see if they make any difference and try to find see if ques-

tion find some answers you know rather than just doing studies that will give us something 5 years from now.

We had the same issues in, I remember in Desert Storm, Desert Shield, about all the illnesses and the people came, witnesses came up and said well, we don't think there is anything to this, you know, and then years later, we find out oh, yes, there was problems there in exposure to things that go back to Agent Orange. I mean, it doesn't do any good to have a study that comes in 5 years from now, I guess it will help the people and I know there are some people who it takes a year or so before these signs become apparent.

But I just hope there is a sense of urgency. I feel that we should be doing more and it sounds like you are really getting to it now but I hope we just don't do studies. That kind of leaves me cold.

General ROCHELLE. Sir, if I may, I would never be able to forgive myself if I didn't—if I allowed the Committee or anyone to think that we were standing still in the blocks here on this. Let me point to one aspect. On the fourth of March, the Vice Chief of Staff, General Pete Chiarelli, convened a worldwide secure VTC with every commander, senior commander who lost a Soldier in the month of January. That session was a 2–hour session, which included senior leaders from Iraq, Afghanistan, the Military Academy and installations flung far and wide. And he reviewed in detail some 35 critical items that he constructed that he wanted the field commanders to report out to him on. It was not accusatory. It was not a condemnation, but it was an attempt to absolutely demonstrate the focus at the senior level of the Army on this matter, is it a crisis? Sir, I would tell you, one suicide is a crisis. That would be my response. We are absolutely moving out on this. And we have, we are investing $50 million in the National Institute of Mental Health effort, which is the largest in the history of NIMH to help us get after this, at the same time.

Mr. DICKS. Will there be interim reports, not just a report from 5 years from now, where will there will be interim reports like a year from now or six months from now? Here's what we know now, here's what we are looking at?

General ROCHELLE. There is a draft report right now, sir.

Mr. JAMES. Sir, if I could just emphasize, this is an issue we are, in fact, taking very seriously, and I want to clarify.

We view the study and the initial stand-down as critical courses. In addition to the stand-down, we see that there will, in fact, be a chain teach second phase. We were hoping that chain teach—that the Soldiers on the ground, the sergeant NCOs, in fact, once they are given a curriculum and once they are given some parameters, that they will, in fact, experiment and try to reach out and try to do things that are, in fact, innovative and try to identify and look for best practices. So at the time we are doing the study we will, in fact, be doing the chain teaching.

The third phase of the program, which the Secretary has admonished us and the Chief of Staff has weighed in on, is absolutely critical is sustainment, is that there has to be a sustainment period with or without the study to continue the sensitivity, and we have talked about issues like doing this every six months or doing it for

every new group of inductees into the Army or graduates of basic training courses or graduate of the NCO schools.

A lot of that is still to be planned, but we want to give the folks on the ground a place like Ft. Carson the maximum flexibility, in fact, to do the chain teaching phase two, do the sustain phase three, and do it around a core competency that is incorporated, and at the same time, in fact, be able to use their experiences to improve on the ground and then share that across the enterprise.

Mr. DICKS. Thank you.

SUICIDE

Mr. MURTHA. Seems like some of the suggestions Mr. Dicks was talking about when you talk about divorce, marital problem, financial problem, fits in line with what these enlisted men and women suggested to making sure you counsel the spouses before people go overseas so that when they are overseas they'll know exactly what is going on.

And the one thing, the stigma which we place on a person that has an emotional problem I think we have gotten to the general officers. I think we have gotten to the Secretaries.

I brought this up to the group at either Carson or Benning, this guy said, well, I ran into that in Iraq, and he said—the guy said he wanted to commit suicide. I said I gave him a gun. I said go commit suicide. Well, you can see we have got some work to do. That obviously wasn't the appropriate reply, and none of us would expect that to happen. The guy didn't commit suicide. He thought he was a malingerer. It is a delicate thing. We know that. We appreciate what you are doing, but it is a big problem. It is going to be a big problem down the road.

Mr. JAMES. Mr. Chairman, I will personally take your counsel to heart about the need for the counseling. It is an issue that we are grappling with, and we may need to get back to you for some help, because with regard to our geographic disbursed workforce, particularly the Guard and the Reserve, that is a difficult issue. We are doing a much better job on both posts, camps and stations issue, but I will tell you in candor with regard to those folks who are in the hinterlands, we are not doing as well as we should.

Mr. YOUNG. Mr. Chairman, if you will yield on that issue, just a quick story. My son served in the military and during his time there he said you know, Dad, a lot of these kids could use some counseling. He said there are some serious issues out here and they are not being dealt with. But after his time was up and he got out, he went back to school and he became a psychologist.

Well, he—he will be a psychologist in, I think, 4 weeks from now. You are all invited to the graduation and he said his motivation was to get this degree to get this certification to be a psychologist and go back into the military to help with these kids because he said there were so many just in his unit that needed that kind of help. I am just wondering if we have enough qualified personnel available to counsel in a case like this and the issue that the chairman raised about here is a gun go do it, that is something wrong with that and the suicide rate has gotten us all really concerned. The Subcommittee on Military Construction and Veterans Adminis-

tration had a number of hearings already this year on that issue and it is frightening, and so I just raise that issue.

I am not sure you have got the qualified personnel to do what has to be done.

Mr. MURTHA. What Mr. Young is saying if you need money, you know, make the suggestion because that is a perfect fit for the supplemental, if you need money to expand this program. Mr. Frelinghuysen.

FORCE GENERATION PROGRAM

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman. Most of our States have sent National Guard units to Iraq and obviously are prepared to do it into Afghanistan. New Jersey has 3,200 in Iraq, around the Baghdad area. It is the single largest deployment since, I think, in New Jersey's history and half of our Guard is overseas.

General Rochelle—first of all, thank you for your service. You mentioned supply and demand. I understand what that is, but what happened to the Army force generation program? Where does that stand? We know these Soldiers are ready to do whatever they need to do. But what happened to the whole plan of one year deployed, five years back, you know, in States? What happened to that plan? Where are we?

It has a lot to do with obviously issues of psychology and moral and your ability to retain soldiers.

General ROCHELLE. General Casey has said that the Army will be back in balance in fiscal 2011. The shorthand definition of what that means is that the Army will be at its rotational balance under Army force generation model of one year deployed three years back for a total of four on the active component, one year back, one year deployed, four years back for a total of five for the Reserve components. We are not there. That is the equation of supply and demand that I mentioned. The demand right now for Army forces will not permit us to achieve that level of balance. The objective is to be there in fiscal 2011, and lots of energy is being placed into getting us there.

GUARD DEVELOPMENT

Mr. FRELINGHUYSEN. So the Guard units that are over there now, and come back in the case of our Guard from New Jersey, what would be their potential for going out again? Obviously there could be, we could considerably raise the stakes and in Afghanistan. That might sort of change the overall equation but what would be the likely scenario for a Guard unit that is finishing up what would be the likelihood of their going back again what would be the rotation.

General ROCHELLE. With the exception of very low density and high demand Guard and Reserve units, military police as an example, with the exception of those, the likelihood that they would deploy in less than three–years dwell, beginning in fiscal ten is low fray, and how about the capability of some of those coming back? I mean, you know, we obviously don't deploy people unless they are fully capable but there have been obviously some evidence when some of these soldiers come back, their units are less than fully capable.

Obviously there will be a period of reset for reserve component units, no different, except in length, than the reset period for active component units. That includes the post deployment health assessment, post deployment health risk assessment. That includes an infusion of equipment, training and people and then back into the four General cycle ideally which is your question to deploy in about three or four years.

Mr. FRELINGHUYSEN. So this continues to be a work in progress?

General ROCHELLE. Very much a work in progress.

Mr. FRELINGHUYSEN. So even though you have set a goal of 2011, it is very much subject to change?

General ROCHELLE. Well, it is, yes, absolutely subject to change.

Mr. FRELINGHUYSEN. I understand that, but in reality, we sort of set forth here a goal to give the soldiers some feeling that they would have, you know, a good idea what their obligation would be on the battlefield.

General ROCHELLE. Indeed, and Soldiers tell us in surveys that we conduct routinely that this one thing they are seeking is predictability and our fortune is the vehicle.

Mr. FRELINGHUYSEN. It is the vehicle but we are not there.

General ROCHELLE. We are not there.

Mr. FRELINGHUYSEN. There is not the degree of predictability.

General ROCHELLE. That is a correct statement.

Mr. FRELINGHUYSEN. The model is there, but in reality, we are far from fulfilling it.

General ROCHELLE. Yes, sir.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Visclosky.

CONTRACTORS

Mr. VISCLOSKY. Thank you, Mr. Chairman. Gentlemen, thank you very much. I want to ask about contractors. In October of last year Nelson Ford, the Under Secretary of the Army, said we really don't know the number of contractors to that we have, and the quote goes on. What steps is the Army taking to understand the role of the contractors, to understand how many contractors you have and what the right mix is? Contractors aren't inherently bad, but it does seem like the Army doesn't have a good handle on it at that point.

General ROCHELLE. Sir, I am vaguely familiar with Secretary Ford's comment. I have read it. Your question about what is the Army doing, the one thing I can speak to authoritatively is that the Army is attempting to account for our contractors in much the same way that we account for Soldiers, with an information technology system that is, today, under the auspices of our Army materiel command, the largest deployer of our contractors, to account for contractors both in theater as well as in other deployed environments, Korea, et cetera. Beyond that I am afraid I can't—elaborate on the Secretary's comment.

Mr. VISCLOSKY. In the 2007 budget, more moneys were spent on contract services than military and civilian pay combined in the Army, and again, I don't want to be judgmental. That may not be bad. But that is not the way it was seven years ago. You are continuing to see this increase of payment to contractors as to opposed

to what you are actually paying people in uniform and civilian. Is that trend going to continue unabated? Is there a change in the composition of the types of contractors you are hiring? Was it food services before? Is it security personnel now? I would just like to have some sense of why that has continued to escalate. What is different today than 2000?

General ROCHELLE. Well, I think a number of things are different. First of all, I can't validate the numbers that you mentioned in terms of the relative pay for contractors versus military personnel. But among other things that have changed is the demand, back to the dialogue with Representative Frelinghuysen, the demand is such that the forces, all the forces are inadequate to address the level of the demand. Therefore, the contractors are a viable alternative.

I should add, though, that in a number of instances, we are insourcing those contractor support requirements with Department of the Army, and I will only speak for the Army, Department of the Army civilians, and I would offer for the record a clearer view of just what that looks like.

[The information follows:]

To date, the Army has in-sourced 1,164 positions formerly performed by contractors to an average savings of $46,000 per position per year.

Mr. VISCLOSKY. Okay. General, if I could follow up some more, I mean, I would not argue the point that you are underforced, or the demands that are placed on the Army, and I absolutely agree with that. To the extent a lot of the contractors who are serving next to military or civilian personnel are paid multiples of what that person in uniform is being paid, I guess you'd have the tension between well, if you are in uniform, you are a member of the Army, we are paying you to fight as opposed to doing some type of logistical duty. But if money is part of the problem and we are paying contractors much more per person than we are somebody in uniform, wouldn't it still be more cost effective if somebody is in a uniform to pay them and pick up more people? Are we paying somebody in that depot two, three, four times than we are paying that military personnel, couldn't I pick up some more personnel and get the job done?

General ROCHELLE. That may be——

Mr. VISCLOSKY. Oversimplied?

General ROCHELLE. Thank you, sir. I was trying not to be disrespectful. That may be an overly simplistic analogy, I think one that would require a little bit more study.

Mr. VISCLOSKY. I am very concerned about it. Mr. Frelinghuysen and I serve on Energy, and again, you are the Army. You are not Energy, but we are running nine to one contractors versus Federal employees and contractors running the Department. And we have had hearings previously here as far as the ability of various departments, including the Army, to control the contractors. And in the end, you are in charge. They are not, and that is one of my great concerns over and above the money is making sure we are running the government. So it is an area of deep concern for me.

General ROCHELLE. I understand, sir.

Mr. VISCLOSKY. Thank you, Mr. Chairman. I understand that the Army has found an average savings of $44,000 per person for in-sourcing.

General ROCHELLE. I have seen that figure. I do not know what is behind the figure.

Mr. DICKS. Would that be a civilian worker or a military worker?

CONTRACTORS

Mr. MURTHA. Let me clarify this whole thing. You have 144,000 contractors in Iraq, 274,000 in Central Command. It costs an average of $44,000, according to the study that you folks have given to us, per person. Last year, this committee tried to increase direct hires so that you could hire civilians to do the same job these contractors are doing because you not only pay the contractor, you have to pay the contracting people a percentage and so forth and so on, and so that is where the $44,000 comes in. We cut 5 percent out of contracting. We added $1 billion for direct hire. It fell by the wayside in the Senate because the Defense Department objected to it.

Now, I asked the President himself. I said, Mr. President, what is the schedule for reducing the contractors in Iraq? How are we going to get them out while we are getting the troops out? Well, he turned to the Secretary of the Defense and Admiral Mullen, and none of them could give me an answer. We are asking the Defense Department to give us an answer so that we have some semblance of order. The troops are coming out. Are the contractors coming out because it costs more to keep the contractors there.

Now, I see Ronald Marrow says okay, we are going to reduce the contractors. Well, we ought to know. He shouldn't be making an announcement. We should find out what is going on over there about these contractors.

So this Committee, the first hearing we had was on contractors. So we are concerned about the number of contractors we have. So we need up to speed on contractors and there is no more important part of readiness than contracting.

Mr. Rothman.

IN-SOURCE SAVINGS

Mr. ROTHMAN. Gentleman, I notice on the written testimony of the gentlemen that on page 6, it says of their testimony that the results are $48,000 per person in-source saving. This is your written testimony?

General ROCHELLE. That is correct.

What I said was I do not have the details—the depth of details behind that statement. I am unfamiliar with it.

Mr. MURTHA. Let me just say we have got to get this under control. We have got to find—when we put money in for direct hires and we take money out of contracting, the Defense Department objects to it because we did it because it wasn't something we thought this thing through. Now this year, we are going at it a little differently but you should think about this for the base bill so we can save some money here, how we get these contractors out. Mr. Kingston.

ATTRITION

Mr. KINGSTON. Thank you, Mr. Chairman. General Rochelle, I wanted to follow up on conversation we had with the Air Force yesterday about some observations of NCOs that a lot of the soldiers were physically up to where they needed to be and I see that in June of 2003, the initial entry training attrition rate was almost 15 percent, but by 2007, it had dropped to about 8–1/2 percent. What do you attribute that change to?

General ROCHELLE. Well, among other things, I attribute the change in the attrition, the initial entry attrition rate to a concerted effort on the part of our training and doctrine command to assist every single individual to make it through basic training. That is not reducing standards, but it is a change in philosophy. If I may, back in 2001, 2001 to be precise, there was a similar change in philosophy under leadership in the then-recently activated accessions command. Rather than crossing one's arms and saying to a young recruit prove to me that you are good enough to be a soldier, the philosophy in 2001 was let me assist you in meeting the standard, and what I attribute the rate and the decrease you are referring to is that—revisiting that philosophy.

RECRUITING

Mr. KINGSTON. Well, these NCOs also are saying that the Army needs to get harder and the new recruits lack discipline.

General ROCHELLE. First of all, I accept that. I accept that statement on the part of our non-commissioned officers. We see that, a similar statement in our surveys that we do of non-commissioned officers and their perceptions. The interesting phenomenon, though, sir, is that the further one moves away from the immediate soldier, the better one's perception meaning elevated in rank and elevated in distance from the immediate soldier, that perception changes. So perhaps the sergeant major would give you a different perspective than would the buck sergeant than would the staff sergeant.

One other point, if I may——

Mr. KINGSTON. Well, General, I want you to finish that point, but I want to revisit that because just because the perception changes that doesn't make it factual.

General ROCHELLE. No, sir, it doesn't. It doesn't, nor does it add significant credibility to the other perception would be my point.

Mr. KINGSTON. Well, what was your other point because I interrupted you?

General ROCHELLE. My other point is that today we have to realize that again, as I mentioned to the chairman, only three out of 10 young people are eligible to serve in our Army today, for one of three reasons, the absence of academic credentials, a high school diploma, overweight and obesity is becoming epidemic in America; and then third, the background, the ability to pass a background screen to serve in our force. When you extrapolate that to what is the correlation for officers, the number becomes even more startling. It is one out of 10 are eligible.

So there is a problem. And even before this very committee, Mr. Chairman, I believe you would recall, I have said in the past, there is a challenge and there is a problem and it is a national problem.

Mr. KINGSTON. In terms of that obesity rate, do you have any recommendations, some of us have served currently or in the past on the Agriculture Committee and we are always studying school nutrition and exercise and one of the frustrations is that the nutrition school lunch program is the USDA and the Department of Education really does the physical education stuff and they are almost seems to be a firewall in terms of the two talking to each other and sharing data and I was wondering if the Department of Defense or the Army had any observations or any clues to put in that.

General ROCHELLE. Sir, I am unqualified to comment on that, grossly unqualified to comment on that, but I will offer a bright spot and that is that as a Nation, we appear to be addressing the issue of obesity openly and in a national way with respect to a debate on this subject that I see is encouraging.

Mr. KINGSTON. But obesity is the number two reason, academics and the obesity were the first two? Were these all in an order or——

General ROCHELLE. Obesity would be the second or third. The first would be behavioral or disciplinary issues in terms of waiver reasons, reasons for a waiver.

Mr. KINGSTON. Thank you.

Mr. MURTHA. Ms. Kaptur.

OFFICER SHORTAGE

Ms. KAPTUR. Thank you, Mr. Chairman, and thank you, gentlemen, for your service to our country. This has been a most interesting hearing.

I wanted to comment on page three of your testimony. General you mentioned officer shortage in the Army continues to keep the officer corps out of balance. I am wondering if your own experience you think there is any relationship between the officer shortage and the exponential rise in the number of contractors serving in the Armed Forces? Serving the Armed Forces and the pecuniary interests that seem to drive involvement in military matters today, as opposed to patriotic?

General ROCHELLE. I would attribute no rise in the number of contractors to the current officer shortage. The current officer shortage grows out of a decision in the 1990s to downsize the Army, and we put the Army on that track toward a much, much smaller level force. We are still living with the consequences of that decision in the 1990s to this very day.

The second contributing factor, as I mentioned earlier in my comments, is modularity, which brings a higher concentration of officers with it.

But point number one, the pecuniary issues you mentioned, I don't really have a notion about that. I am not, I don't believe there is a relationship.

BUDGET

Ms. KAPTUR. Do you know how much the Army has spent on bonuses in the current budget that is being submitted? What are we spending, compared to 10 years ago?

General ROCHELLE. I can't tell you where it is relative to 10 years ago, but our recruiting and retention costs for fiscal 09, I am speaking the current year budget, not 10, $2,029,000,000. This includes recruiting and retention bonuses, education incentives, marketing and advertising and recruiter support costs for the Army Active Component.

Ms. KAPTUR. And I think for the record, it would be very interesting how that compares to 5 years ago and then 10 years ago. That is a sizeable, my guess that is on an ascending path.

General ROCHELLE. That would be true if one looked, I am confident that that trend would prove accurate ma'am, if you want to look back five years ago, but in the recent years, 2008 to 2009 and what we are projecting for 2010, it would begin to turn downward.

Ms. KAPTUR. All right. Can you provide for the record a—the enlistment bonus, the—when they are reenlisted in theater, whatever, all these different bonuses that have been tacked on, maybe I am not aware of some of them, that would accrue to the individual soldier.

General ROCHELLE. We would be happy to.

[The information follows:]

Specifically focusing on the recruiting and retention bonus programs for the Army Active Component, we spent or anticipate spending:

[In millions of dollars]

FY 2000	FY 2005	FY 2008	FY 2009
$200.3	$671.5	$1,206.8	$1,170.2

SUICIDE PREVENTION

Ms. KAPTUR. Thank you very much. I want to turn to your testimony and Congressman Dicks did a great job on this this morning, the whole issue, you have got suicide prevention, page 10 of your testimony and other issues relating to soldier well-being and health, and I am interested in the way that the architecture of what you have presented in your testimony. I think it is very interesting you focused on suicide as opposed to Soldier well-being. For example, the issue of PTSD in this type of, the types of engagements we are in you have 98 percent of your time is total boredom and 2 percent of your time is utter terror. We know that the nature of PTSD is that you know upwards of five different incidents like that, and you have got it, 20 percent of your Soldiers also have it.

If America had consciousness of this, we would be better able to articulate it in testimony. Half the homeless in our country are veterans. They are testifying testimony to our failure to have understood this in prior conflicts. Hundreds and hundreds of thousands of people wandering all over this country and they are veterans.

This tells us in living color that we failed in the past. I am really glad to hear that you are thinking about this, but only to address suicide, which is the ultimate act of hopelessness doesn't deal with the reality of what the rest of the force is dealing with. And my

concern is, as hard as we have worked to try to get a service, a department wide, every single department, Army, Air Force, we had Air Force in here yesterday, Navy and Marine Corps, to get them all to have a coordinated program in this. I can't tell you how difficult it has been to deal with the Department of Defense on this issue. If our chairman hadn't taken a leadership role on this, if Mr. Young hadn't been a strong partner in the efforts we wouldn't be anywhere but I am concerned that other issues you don't address, you don't address fully the PTSD, you don't really report back on what has been done today, you just talk about the study with NIMH.

MENTAL HEALTH

One of the other Members discussed Guard and Reserve. I come from a nonbase community. The problems of PTSD with our returning Guard and Reserve are huge and as a result over the last five cycles, I have put money in this bill and forced it down the throat of DoD, and they wanted to spit it out, they tried to spit it out every year and what we are trying to do in Ohio and we had the agreement of our Adjutant General to examine every returning vet to Ohio, including the majority that don't go back to a base and there are many Army MPs in that group and combat engineering units and what have we learned? We have learned that working with DoD is an impossibility. That as hard as we try to roll out this assessment of our returning troops, one of the key elements which is a genetic profiling of predisposition to some of these illnesses, and in a certain part of the brain, somewhere between the units in Ohio, the Adjutant General and the Secretary of Defense, genetic profiling, the testing that they need to do on a volunteer basis has been rejected.

We are trying to find out who did that, all right. What I would really appreciate and I know my time has expired, Mr. Chairman, I would appreciate your helping me, and I said this to the Air Force yesterday, to find me the genius over there at DoD, that is, in charge of mental health, and all they do is bring us, this service has this one, that service has this one, it is not well coordinated, and I want to sit them down with the researchers and with our Adjutant General and I want to solve this problem so we can do the assessment and treatment of our veterans. It is really frustrating.

And we don't deal—Congressman Dicks talked about a study. We want to look to your study in Ohio. We want to be a part of the whole. It shouldn't be this hard, and it tells me that something is really messed up over at DoD. One of our top research doctors, brilliant human being, said to me, Marcy, in my whole life, my worst experience with any Federal department is with the Department of Defense, what is wrong over there. This is one of the neuropsychiatrists. This guy could win a Nobel Prize with what we are trying to do, and he keeps running into these walls at DoD.

So can you help me solve this problem of the assessment we want to do in Ohio by connecting our Guard to whoever is in charge over there and it is Army by the way, over at DoD so we can get this done right?

Mr. MURTHA. I think I could probably answer this better than they can, Ms. Kaptur. I think Secretary Kasells and Dr. Emery

have been working this. We gave them money to do this. In January of this year, they just started to come up with a plan, which they briefed me on. We had a hearing about it, but they aren't far enough along to give us the details. But the Guard is still—I had a young fellow commit suicide that was in Iraq, came home and worked for a year and then committed suicide. So we aren't there yet, but I do think the Defense Department is addressing it because of the direction we gave them, and I think we are starting down a trail. We told them to hire psychologists and psychiatrists. We told them to go in that direction and to counsel troops that needed it.

We changed the sensitivity of people. I think it is a very complicated process, but I think that Dr. Emery's the one to talk to, and I think she can help you with the Guard. She's just not there yet, even with the Defense Department, let alone the Guard. But if you talk to Sarah, and Sarah Young and Dr. Emery, I think you can get to where you want to go.

Ms. KAPTUR. Mr. Chairman, thank you very much, and I would hope that our study could understand there is something going on in Texas. I read about it in some magazine article. Mr. Chairman, I think a number of us have pieces of the whole but we can't seem to connect it. We need an architecture to do that.

Mr. MURTHA. We haven't gotten there yet. That is the problem. As you say it takes so long for them to get anything done, but we are I think moving step-by-step in the right direction, we hope.

The gentlewoman's time has expired. Ms. Granger.

EDUCATION

Ms. GRANGER. Thank you. General, I want to return to your response about the requirement of a high school diploma and I will admit, I have got a bias: I am a former high schoolteacher and may not have been something I taught in my class that made some someone a better Soldier, but there is often a commitment and a discipline coming from finishing something, but my main experience which as a mayor when we were trying to recruit companies to come in my city or maintain those companies and time and time again, the CEO or the training director would say, we have to have a basic level of education and knowledge in order to train those employees, oftentimes for entry level jobs, but became very good jobs, and we wanted to keep them.

Today's Army, I mean, this is the Committee that funds the equipment and the technology and it is very sophisticated technology and equipment, and I am proud to serve and be a part of that but to be able to train, I think that that is extremely important. So I have some questions around that.

WAIVERS

One thing you talked about waivers, and I want to know how many waivers are granted to recruits, but you talked about you said the number one, the most common waiver, the way I understood was a—had to do with discipline and behavior and three was obesity.

General ROCHELLE. I believe that is correct.

Ms. GRANGER. So where does—where do they drop out and what kind of waivers are allowed having to do with education or learning? Second, what is the attrition rate for recruits without a high school diploma and the third one would ask you to say how does this economy affect your recruiting? There are a lot of well-trained good people that are without jobs or will be without jobs that will be wonderful to serve in the military, and how do you think that will be affected?

General ROCHELLE. First of all, let me take the latter question first, if I may. How does the economy affect it? It affects it very positively in terms of the numbers of individuals seeking entrance into the military. I commanded U.S. Army recruiting command from January of 2001 until October of 2005 and relative to that period, we are currently in a heyday in terms of individuals seeking to serve in the military. The difference is, and this is why twice I hit the qualifications because none of the effects of the economy impact the number of individuals who are qualified. So out of the those who are coming to the front door of a recruiting station still, three out of ten are qualified to serve without a waiver, still only one in ten is qualified to be commissioned as an officer. That doesn't change.

On the point of waivers, in 2008, let me make two points. In 2008, our waivers decreased over the previous year. Total waivers, 17,079 out of 80,000 assessions. In 2007, that number was 18,234. And comparing fiscal year 2009 current month to date to fiscal year 2008, we see a 4.5 percent decrease in the number of total waivers. So we are using this as an opportunity to elevate the quality, two more data points, if I may.

As a former high school teacher, the total number of enlistees that we categorize as DoD would categorize as tier one, high school diploma, not a GED, but a high school diploma and are able to score in the upper half of the Armed Services vocational aptitude battery increased 2008 over 2007 by 2.1 percent, at the same time that for that very same period, the total number of lowest mental category we are allowed to enlist decreased by 1.2 percent.

Ms. GRANGER. You gave me, you gave me total numbers but what I asked for is those without high school diplomas, and I think you are giving me total numbers.

General ROCHELLE. Of waivers, I gave waivers.

Ms. GRANGER. Were you giving me total waivers or waivers without high school education?

General ROCHELLE. I gave you total waivers.

Ms. GRANGER. Do you have those without a high school education?

General ROCHELLE. I do not have those.

Ms. GRANGER. Can you get them to me?

General ROCHELLE. I can get those for the record.

Ms. GRANGER. And the other thing, in giving this and you say it is still the same percentage or the same numbers but when you are talking about there is total, you are choosing from a larger group now because of the economy.

General ROCHELLE. We are.

Ms. GRANGER. So is it possible to raise those standards back to where they were as far as a high school diploma, given the numbers?

General ROCHELLE. If, indeed, my point about the increase in the numbers of high school tier 1 did not communicate that that is precisely what I was attempting to communicate, that we are raising the bar.

Ms. GRANGER. And you will come back to me with the numbers?

General ROCHELLE. I will.

Ms. GRANGER. Thank you.

[The information follows:]

1. Below are the annual number of non-prior service (NPS) recruits enlisted in the Army's Active Component who did not possess a Tier 1 Education Credential (typically a high school diploma) and required an enlistment waiver:

Fiscal Year	*Non-prior service recruits without a tier 1 ed credential requiring a waiver*
FY03	1,196
FY04	751
FY05	1,545
FY06	4,374
FY07	5,308
FY08	5,043
FY09 YTD	1,400
Total	19,617

2. During this period, the Army enlisted more than 464,400 new Soldiers into the Active Component resulting in approximately 4.6% of its new recruits falling into the above mentioned category.

Mr. MURTHA. Mr. Rothman.

POST-TRAUMATIC STRESS DISORDER (PTSD)

Mr. ROTHMAN. Thank you, Mr. Chairman. I am going to speak to my colleague and friend, Ms. Kaptur, because I did want her to know that and you gentlemen, Secretary General as well, that I respectfully disagree with her on the notion of DNA testing. Either of you gentlemen could you tell me the percentage of soldiers who return from service with PTSD.

General ROCHELLE. I cannot tell you that percentage.

Mr. ROTHMAN. Is it 1 percent? Is it 99 percent? Somewhere in between?

General ROCHELLE. I would not speculate. I have heard different—I have heard different estimates from our Surgeon General who is testifying here today. And I would like to take that for the record in order——

[The information follows:]

The Army's ground-breaking Mental Health Advisory Teams have found that 15–20% of Soldiers redeploying from Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF) have symptoms of post-traumatic stress, anxiety, and/or depression. However, not all of these cases develop into post-traumatic stress disorder (PTSD). According to the Military Health System's medical data repository, 4.8% of all Soldiers (all Components) ever deployed to OIF/OEF have been diagnosed with PTSD. We recognize, however, that some Soldiers with PTSD do not seek treatment within our Military Health System. Thus, although 4.8% of Soldiers are diagnosed with PTSD, we acknowledge that a larger number of redeploying Soldiers likely suffer from the disorder we are working hard to reduce the stigma associated with seeking help for behavioral health concerns.

Mr. ROTHMAN. What are the different estimates you have heard?

General ROCHELLE. They vary. They vary.

Mr. ROTHMAN. Mr. Chairman, you don't know whether it is 1 percent or 99 percent of your forces who are returning who have PTSD, General?

General ROCHELLE. No, sir. What I am saying, sir, is that I don't wish to speculate.

Mr. ROTHMAN. Well, give me a ballpark, sir.

General ROCHELLE. No, I don't think I would like to do that, sir.

Mr. MURTHA. The figures that the committee has are 300,000 or more that they project. Now I don't know how accurate those are, but why we need to know this obviously is we have to prepare for the future and prepare for the health care costs, which have increased so significantly. So that is the figure that we have.

General ROCHELLE. I clearly understand, Mr. Chairman, and as I believe you pointed out, those numbers and the estimates change because we are constantly finding out that individuals who have shown no post-traumatic stress or traumatic brain injury subsequently will indeed——

Mr. ROTHMAN. So the number is probably higher? I find it——

Mr. DICKS. If the gentleman would yield just to make a point briefly, I think and I heard Mr. Young say that a lot of times this doesn't show up until a year after the person is back.

Mr. ROTHMAN. No, but I am saying I am looking for the bottom line, the lowest figure you have, and then we can assume it comes up. I will tell you why. If we start testing for DNA, there is lots of brave new world fears and realistic fears and concerns that I have about that—brave new world being the name of a book—if for example 20 percent of our forces come back with PTSD or then in the future have PTSD, if we have a genetic test that prevents these people from serving, that means the force structure will be 20 percent less.

Now, the general tells us the force is out of balance and I believe that it is. So do we remove 20 percent or we change the circumstances of the service? I think probably addressing the circumstances and nature of the service would be more important but I don't believe that the Army could sustain 20 percent cut in forces right off the top, plus there are other dangers to society in ruling people ineligible to serve because of a psychiatric weakness as it would be undoubtedly described or worse.

General, you talk about behavioral or discipline deficiencies in the, in those that you are seeing as, who are applying to be members of the force. Could you describe what those behavioral, as the father of five to my own and three step kids, I think they are almost all out of danger, God willing, but tell me what those behavioral and logistic problems are. Is it they smoke marijuana? Is it that they have committed armed robbery? What is the nature of the behavioral or discipline problems that they present to you?

General ROCHELLE. Thank you for the question, sir. It runs the gamut, everything from petty theft up to possession of controlled substances, all the way up to individuals who present and who are not admitted into the military for crimes that would be categorized as felonies, given the level of punishment that would attribute to it.

RETENTION

Mr. ROTHMAN. Felonies? That is significant. There is a figure that I saw that the captain retention program were $443 million was spent. This is from your written testimony.

General ROCHELLE. Yes, sir.

Mr. ROTHMAN. Produced an increase in retention from 88 percent to 89 percent. So basically that 1 percent arguably got us or—rather, $443 million got us a 1 percent improvement in officer retention. Do you think that is a good use of that money?

General ROCHELLE. I do. I think it is an extraordinarily good use of the money. Department of Defense estimates of the numbers of the individuals who were uncertain or had already indicated a desire to leave the military, up to 50 percent of that number were actually retained by that bonus. That is a DoD estimate and study.

Second point, we don't know what retention would have looked like in that, over that 18-month period had we not employed using the authorities granted us by this committee, to offer that incentive pilot and it was a pilot and it is a very successful one.

Mr. ROTHMAN. Does a percentage of 50 percent square with your figure that it was only a 1 percent increase in retention?

General ROCHELLE. It does. We are measuring two different things. The 1 percent gain was over basic historical projections of retention. So we moved the needle by 1 percent. The 50 percent is a survey given to individual officers, what is your potential.

Mr. ROTHMAN. I get it.

Mr. JAMES. If I may, let me just add that when you talk about the 15 thousand captains, we are talking about four years of college by and large. You are talking about four to six years of experience. To replace that human capital, the price General Rochelle is absolutely correct, the price was absolutely on the money. To replace ten years of, to rebuild that and to retain and to be able to retain that clearly was worth the money.

Mr. ROTHMAN. I think what the General is saying—which I understand, is that the 1 percent increase may seem modest but given the tremendous historical pressures and stresses on the force, not only wouldn't have gone up at all it would have dropped significantly. So that.

General ROCHELLE. Yes.

Mr. ROTHMAN. Thank you, Mr. Chairman.

Mr. MURTHA. Let me get this clear. Why would only 50 percent get the bonuses?

General ROCHELLE. No, Mr. Chairman, that is not what I said. 50 percent of the individuals surveyed by DoD, captains in the Army who were surveyed by DoD who indicated their intent to either separate from the military or uncertain of their intent to remain in the military, changed their minds as a result of that incentive program, 50 percent.

Mr. MURTHA. When——

General ROCHELLE. And were retained.

Mr. MURTHA. I am sitting here and I am saying to myself, I am going to stay in, but I might as well say I am getting out so I get a bonus.

General ROCHELLE. I can't account for that phenomenon.

Mr. MURTHA. You see what I am talking about.

General ROCHELLE. That is the potential, Mr. Chairman. I can't account for that phenomenon, nor the DoD.

Mr. MURTHA. And what other percentage of officers get a bonus?

General ROCHELLE. May I take that for the record, Mr. Chairman?

Mr. MURTHA. Yes. Mr. Bishop.

[The information follows:]

The recent Army officer retention bonus program for Regular Army captains targeted officers in the Army Competitive Category and select administrative Medical Service Corps specialties. Of the 23,000 captains eligible for the program, we had 14,500 who accepted bonuses, which equates to an acceptance rate of over 65%. We have offered no bonus to Army Competitive Category officers at any grade other than captain. These numbers do not include officers serving as medical health care professionals in the Army Medical Department or attorneys in the Judge Advocate General's Corps, who may be eligible for other incentives.

ANTIDEFICIENCY ACT

Mr. BISHOP. Thank you, Mr. Chairman. Welcome gentlemen, General Rochelle and Mr. James. I want to ask you about something that was somewhat disturbing to me as I was reading through the notes here, and it has to do with the Antideficiency Act exiting fiscal year 2008. I am looking at my materials here, and it says in September of 2008, the Army obligated $200 million more of military pay than was available in the Military Personnel, Army account, and that it subsequently asked to transfer funds in the account to cover the difference.

Of course, the committee staff is of the opinion that the Army violated the Antideficiency Act, and of course, we are told that the Army lawyers say that that is not the case. But the Antideficiency Act makes it clear that an officer or employee may not make an obligation exceeding the amount that is available in the appropriation.

On what basis did the Army determine that the obligation of the $200 million did not violate the Antideficiency Act? And I don't know if you can give us what your general counsel said on it, whether that was an investigation and who conducted it and what kind of findings there were, but if the money was available in the military personnel account, why was a subsequent reprogramming request of that $200 million made in the personnel account.

And we are also told that for fiscal year 2008, and we are looking at 2010 now, that the Army is going to send up a reprogramming request of up to $2.3 billion for the fiscal year 2008 appropriation, and if that is true, how is it possible and how is that not a violation of the Antideficiency Act? Do you have any internal controls to detect this kind of overbudgeting, and if you don't, if you do now, how is that going to be prevented in the future?

General ROCHELLE. I would be happy to address that, Representative Bishop. First of all, Army lawyers had ruled that and general counsel has ruled that there was not an Antideficiency Act in that $200 million underestimation, which is exactly what it was. It was a technicality that required us to come back to the committee for reprogramming and I will describe that technicality very simply. The obligations on the military personnel account for fiscal 2008 were closed at the end of the fiscal year and they were based on

known obligations at the time for all manpower costs to include transportation, promotions, pay raises and salaries, of course. Once that is closed, we realized then that other obligations, not known at the time, came in higher and we estimated too low. It is a technicality that requires us to then come back to the committee to request a reprogramming, in spite of the fact that the military personnel account for Army in fiscal year 2008 still had sufficient funds in it to cover those additional costs.

Mr. BISHOP. If it had sufficient funds, why would you need to get reprogramming and does that relate to what the committee's been concerned about with regard to the failure to pay the stop loss payments that the committee had authorized and had appropriated.

General ROCHELLE. Well, the stop loss payments were in fiscal year 2009, sir, and no, the fiscal year 2008 underestimation does not represent neither a failure on the part of the Army to be responsible with the funds appropriated by this committee nor to have the appropriate controls in place.

I might add one final point if I may. We have also asked the AAA, the Army Audit Agency, to look into in addition to the ruling on the part of the general counsel, look into our estimating processes and procedures to make sure that we don't have a repeat of this.

Mr. BISHOP. Okay, and because at the close of fiscal year 2007 the MPA appropriation had a surplus, and at the close of 2008, you were projected to have exhausted all your funds, and of course, it was a second budget cycle in a row that this had occurred and so that is troubling to the subcommittee and certainly to our staff and we want to have some attention placed on that so we don't have to deal with this on a recurring fashion.

General ROCHELLE. Well, please allow me to assure the committee that we are concerned as well, hence the review by the AAA, the Army Audit Agency.

Mr. BISHOP. Thank you.

Mr. MURTHA. Ms. Kilpatrick.

CONTRACTORS

Ms. KILPATRICK. Thank you, Mr. Chairman. Good morning, General, Mr. Secretary. The Chair mentioned 144,000 contractors in Iraq. What percent of those are Army or are they all Army? Are they from other branches of service? Do we know?

General ROCHELLE. I don't. If we assume speaking all of Iraq, they are clearly not all Army.

Ms. KILPATRICK. How many are Army going there?

General ROCHELLE. I am going to have to take that for the record, if you don't mind, ma'am.

Ms. KILPATRICK. Do you know what percent of those are compact infantry on the ground sort of soldier with ours? Do you know what percent of them would be?

General ROCHELLE. None. None would be performing that type of function.

[The information follows:]

CURRENTLY DEPLOYED CONTRACTORS FOR CONTRACT AGENCY U.S. ARMY

[As of 4/22/2009]

LN/FN/US	U.S. Army	Total	Percentage of U.S. Army against Total Personnel
Local National	13,937	24,686	56.46
Foreign National	55,329	80,373	68.84
United States	42,165	55,184	76.41
Total	111,431	160,243	69.54

(Please note that this is a head count as opposed to a full-time equivalent calculation.)

Ms. KILPATRICK. So they'll be servicing in some other kind of capacity?

General ROCHELLE. Services, maintenance, logistics, transportation, there are some security as the chairman mentioned.

Ms. KILPATRICK. Yes, yes, okay. That helps a bit. Are you familiar with the common access card?

General ROCHELLE. I am quite familiar with the common access card.

Ms. KILPATRICK. Has the Army seen any problems with that card? This committee, we have had much testimony on it this year, and this Member's not sure that it is really safe or that it is 100 percent sure. Is the Army experiencing any improprieties with it?

General ROCHELLE. Well, I am aware that there is a problem with accountability with common access cards in theater, and I think that is a matter that is being investigated, or, I should say, looked into by the Inspector General of the Army.

Ms. KILPATRICK. Okay. Contractors issue common access cards—are you familiar——

General ROCHELLE. They are, they issue.

Ms. KILPATRICK. And contractors are not monitored. We want an Army-Army, or military-military. We don't want a contractors' military, particularly——

General ROCHELLE. I understand your point, ma'am.

SEXUAL ASSAULTS/SEXUAL HARASSMENT

Ms. KILPATRICK. Okay. There is been a lot of discussion in the last 24 hours about the sexual assaults that are occurring, and in your testimony, you mentioned a bit about it on page 10 and 11. I am familiar with the programs, the I Am Strong, Intervention Act, and motivate—I like that. Sounds good—Sexual Harassment Assault Response Program, which is the SHAR program, how effective are they? And I do understand that probably being a female and have been reported, you don't get 100 percent of the people responding to being sexually assaulted, be it a man or woman. Do we know what percent do respond and these programs service? Do we know what percent—I guess you have to speculate if you don't know, if it doesn't come to you. Any idea?

General ROCHELLE. In fact, there has been a great deal of study done on this in the public sector. Sexual assault is the most underreported crime in America.

Ms. KILPATRICK. In America? Not only in the military.

General ROCHELLE. Not just the military. The estimates are that 30 to 40 percent of victims actually report.

Ms. KILPATRICK. You are speaking Army, not U.S.—not country?

General ROCHELLE. U.S.

Ms. KILPATRICK. It is higher than that in the military, I assume.

General ROCHELLE. Perhaps. Now we don't have data to actually peg it as lower reporting than the national average, nor higher, but two points I would like to make.

The Army's strategy, which was rolled out last April by the Secretary of the Army and General Casey, is the envy right now of all of DoD because it does, as you say, focus on——

Mr. MURTHA. What is that, envy—something's the envy of all the rest of the service? What is this now?

General ROCHELLE. I am very proud to repeat that. The Army's sexual assault strategy, which was rolled out last April by the Secretary Geren and—General Casey, is the envy of all of DoD, unquestionably so. And it is because it focuses on our Army corps values and the absolute inconsistency, the absolute intolerability of those core values with the simple act of sexual assault or sexual harassment.

Ms. KILPATRICK. And by your own numbers, the Army's numbers are going up?

General ROCHELLE. They are. This may surprise you, but when the strategy was rolled out, phase one of the strategy which was to secure senior leader conviction and then publicize across the entire Army the commitment to this from the top all the way down, our numbers would go up and that is a measure of success of the strategy, because women are more inclined to come forward.

Ms. KILPATRICK. I assume that for men as well. You have men?

General ROCHELLE. Men as well, indeed.

Ms. KILPATRICK. And then do they have the health services necessary even while in the military, as well as out, to deal with that, which goes back, I think, to suicides. My last point was going to be the multiple tours, the time home, back touring, suicides, all of that, is anything done where we can take a look at that to see what else we need to do help it?

General ROCHELLE. Well, make no mistake about the fact that our medical forces and our medical capabilities are stretched pretty thin after seven years of combat, but we have placed into position collateral duty sexual assault response coordinators who serve in a counseling role. That addresses one aspect of it. Unit victim advocates who assist in reporting, who assist in guiding a victim, man or woman, through the process for reporting and, of course, seeking help, but to your fundamental question, our medical facilities behavioral health in particular are stretched pretty thin.

Ms. KILPATRICK. Thank you, Mr. Chairman.

Mr. MURTHA. Not only Army, but I remember Jane Harman brought this to my attention earlier about sexual assault. I went to Admiral Mullen. He's very interested. So you are absolutely right. I just didn't hear what the subject was but the Army has done a good job.

General ROCHELLE. I appreciate your repeating that, Mr. Chairman.

Mr. MURTHA. Mr. Dicks.

CIVILIAN CORPS

Mr. DICKS. Let me ask you—Mr. Chairman, thank you for yielding.

Civilian personnel in your statement on page 5 says currently Army civilian core is over 313,000 strong. I mean is that all civilians that work for the Army in total?

General ROCHELLE. That is correct, sir. That does not include contractors.

Mr. DICKS. Then, of those, over 4,000 are serving in harm's way in the U.S. Central Command area of operations. According to the chairman, we have 144,000 contractors and 274,000 contractors working in Central Command, and why is it that we only have 4,000 of these civilians in harm's way? Is this the same problem that the State Department has of getting people to go, to go to the theater or why would we use contractors when you have $48,000—why wouldn't we increase our civilian force and then send more of the civilians there and less of the contractors in order to save money?

General ROCHELLE. There is a slight relationship with the challenge that the State Department has, but ever so slight, and I simply say that because at the point——

Mr. DICKS. They are all volunteers?

General ROCHELLE. They are all volunteers. And at the point when State Department was asked to provide cultural change—civilians to support cultural change it was DoD through its volunteers, many of them among those that you just cited, who stepped up to the plate. There is a relationship, but it is not the same issue.

Mr. MURTHA. Wait a minute. You are talking about the CERT teams, they are IRR. They pulled Navy people in from IRR. What are you talking about?

General ROCHELLE. I am not talking CERT teams, sir. I am talking transition, civilians on transition teams, police—military police teams and the like—cultural, teams.

Mr. DICKS. Now, you called this the Army's civilian corps. Now, what is the plan for the Army's civilian corps? Are you going to build it up?

General ROCHELLE. Sir, the Army civilian corps speaks to the team of 313,000 civilians in its entirety.

Mr. DICKS. Only which 4,000 are deployed.

General ROCHELLE. That is correct. The term civilian corps refers to the larger population.

Mr. DICKS. Well, you talk about the Army's civilian university. Can you tell us about that?

General ROCHELLE. The Army civilian university was activated last year, 2008, beginning of 2008 as the central coordinating element and coordinating body for all leader development and civilian human resource development training and education for the civilian corps, 313,000. It resides within our training and doctrine command.

Mr. DICKS. Where it is located physically?

General ROCHELLE. Ft. Belvoir.

Mr. DICKS. Go ahead, I didn't mean to interrupt.

General ROCHELLE. That is it, sir.

Mr. DICKS. The ACU will prepare civilians for new demands and fully engage the Army in meeting the objectives of the Department of Defense civilian human capital strategy plan. I guess my question is why—are we going to try to get more of the civilians to go to Iraq and Afghanistan so that we can reduce the number of contractors? Or has anybody thought about that?

General ROCHELLE. Well, I am certain——

Mr. DICKS. I mean, it would be like in-sourcing, wouldn't it, if we were going to turn this over to civilians?

Mr. MURTHA. Direct hire is what we call them.

Mr. DICKS. Or direct hire as the chairman calls it, so there is no strategy to do that.

General ROCHELLE. In point of fact, the number of civilians who are currently serving in Iraq are all volunteers.

Mr. DICKS. But I would like to see if we could get more volunteers and then use that as a way to reduce the contractors. Now, wasn't it one of the Generals Nelson Ford, then the Under Secretary then I am certain, who stated, We really don't know the number of contractors that we have, and we really haven't thought about the appropriate role of contractors on the battlefield. We still don't understand that. That is October of 2008. That is not a very reassuring comment from the Under Secretary. Is that still the case? We still don't have handle on this.

Mr. JAMES. I serve with—Dr. John Anderson with our force management group is, in fact, looking at that. We have, in fact, reported and I want to take this for the record, but I believe that to date we have confirmed that we have 139,000 contractors working State side, and as the chairman has already noted we have a number of other contractors working in CENTCOM. Let me be absolutely clear. The number I get you will be computed in "person years" so that 139,000 means there is actually more in terms of bodies more than 139,000, but I will get that for you for the record.

Mr. DICKS. You say there is 139,000 contractors in the United States?

Mr. JAMES. I am saying there is the equivalent, sir—and I want to confirm the number—there is the equivalent of 139,000 man-year contractors in the Pentagon, yes, for the Army.

[The information follows:]

The Army's Contractor Manpower Reporting Application (CMRA) inventory of service contracts indicates that there are 82,929 contractor manpower equivalents (CMDs) in theater (Afghanistan, Iraq, Kuwait, Qatar, and UAE), and 128,280 CMEs outside theater—both inside the continental United States and outside the continental United States.

CONTRACTORS

Mr. MURTHA. One of the things that we thought contractors was supposed to be was be temporary for a surge. Now, I see contractors on gates. I see contractors out at Bethesda Hospital admitting—not admitting people but showing people around and so forth. They certainly could be direct hire. I mean, they are going to be there permanently as far as I can see. I think we ought to get this contracting thing under control. I mean the budget is, we have been harping on it we are trying to get figures and even Secretary

Gates and Admiral Mullen haven't been able to give us a plan for how we hire people rather than contract out. I know there is guards on the gates. Somebody, they are not only paying them, they are paying the contractor a percentage so we have got to look at this thing.

Mr. FRELINGHUYSEN. If the gentleman would yield, Mr. Chairman, in the theater, and we did have testimony I don't know last week, differentiating the number of foreign nationals, just the single—I mean the figures are in some ways so high and even as we sort of have a larger footprint in Afghanistan, I assume we are hiring up all sorts of contractors that sort of work under the control of the Army Corps of Engineers on these bases, but it would be good to sort of know you know whether these are foreign nationals of that country that we hire, as well as other foreign nationals and if each person is a contractor, I mean that would certainly spike the figures up. There are contractors and there are contractors.

Mr. MURTHA. What Mr. Frelinghuysen is talking about, food service and so forth, we understand that. But what we are concerned about is the person that could be direct hire, which would save us a lot of money and give people a permanent position, rather than going to a contractor. I see they got rid of one contracting outfit there in Iraq, and said they are going to reduce them, but it is money, as well as direct hire working for the government. We appreciate your testimony very——

Mr. BISHOP. Mr. Chairman.

Mr. MURTHA. Mr. Bishop.

ROTC/JROTC

Mr. BISHOP. May I just ask one question. I ask them to provide for the record. With regard to the quality of recruits, one of the concerns that has been raised, I think I have mentioned it to you, General Rochelle, previously, is the lack of ROTC units and junior ROTC units. You mentioned the lack of discipline, the lack of physical fitness as problems for the people who are being recruited and those who are even offering themselves.

Again, do you agree that an increase in the number of junior ROTC units in high schools as well as ROTC units in the colleges would help the Army as well as the other services in getting high quality recruits.

General ROCHELLE. Well, I would certainly agree, sir, that junior ROTC is a program that more than pays for itself in terms of citizenship, patriotism, and at least an understanding of what military service across all the branches really is. It is a wise investment. And there is pent-up demand as you and I have spoken of in recent past. There is pent-up demand across America, every State, for more representation of junior ROTC. It is just, it is expensive.

Mr. BISHOP. But you say that more than pays for the investment, are you exploring the possibility of expanding the number of junior ROTC units? I know.

General ROCHELLE. Continuously under review, continuously.

Mr. BISHOP. What is it that you need, do you need more do you need us to put in an appropriation to increase appropriation for that purpose.

General ROCHELLE. Let me come back to you with a more comprehensive answer to that part of the question, sir.

[The information follows:]

Army JROTC is a proven citizenship program, but there is no expectation that JROTC cadets will necessarily serve in the military—either as a cadet joining the SROTC program at the college level or as an enlisted member joining the ranks of the US Military. The quality of the recruits joining the Army is not a function of JROTC/SROTC, but of the overall quality of students leaving our high schools.

Additional Army JROTC units, as well as other service JROTCs, will result in better quality high school students, but should not be considered as the solution to improving military recruits. Any improvement in the quality of high school students, regardless of the source of that improvement, will improve the quality of military recruits.

Section 548 of the National Defense Authorization Act for Fiscal Year 2009 (FY09 NDAA) required the Secretary of Defense, in consultation with the Secretaries of the military departments, to develop and implement a plan to establish and support not less than 3,700 JROTC units by September 30, 2020. As a result, the Army plans to expand the number of Army JROTC units over the next three years from the current count of 1,645 to 1,910; an increase of 265 units. In order to reach the stated goal of 265 new units, Army JROTC will establish 86 units in FY10, 86 units in FY11, and 93 units in FY12.

Currently, there are over 259 schools with applications on the U.S. Army Cadet Command's Order of Merit List (OML) from schools requesting an Army JROTC unit. On average, the command receives three applications a month from schools seeking JROTC units. Given the number of applications received each month, the command expects there will be 86 schools ready to open in FY10 and 86 more in FY11. Due to the current financial constraints impacting state and local school districts, the command will aggressively market and campaign the Army JROTC program in order to meet the FY12 goal of an additional 93 units.

In February 2008, U.S. Army Cadet Command requested program objective memorandum (POM) funding to establish 265 new schools starting in FY10. The Army's FY10 budget submissions adequately support the expansion of the JROTC program. Therefore, no further adjustments are necessary.

The National Defense Act of 1916 established ROTC on college campuses. Army ROTC is the largest officer-producing organization, having commissioned more than half a million second lieutenants since its inception. Today, Army ROTC has a total of 272 programs located at colleges and universities throughout the 50 states, the District of Columbia, and Puerto Rico with an enrollment of more than 20,000 cadets. It produces approximately 60 percent of the second lieutenants who join the active Army, the Army National Guard, and the U.S. Army Reserve. More than 40 percent of current active duty Army General Officers were ROTC commissionees. The purpose of this program is to produce officers, not enlisted recruits, for the US Army. As a result, there is no direct relationship between the number of SROTC programs and the quality of recruits.

Mr. KINGSTON. If you will yield a minute, you said junior ROTC. What about college level?

General ROCHELLE. Well, sir, the question was would the junior ROTC and Army ROTC—senior ROTC contribute to more recruits for the military.

Mr. BISHOP. High quality recruits.

General ROCHELLE. High quality recruits. Senior ROTC, probably not. That is why I didn't address it. Junior ROTC for all services, I think it would help, and quite frankly, junior ROTC is not a military recruiting vehicle. It is a citizenship vehicle.

Mr. JAMES. If I could just add, I think one of the places where the committee could be of invaluable assistance in terms of making ROTC more competitive and helping us attract more officers is to think about if we could make the bed and board portion of the scholarship system much, much more attractive, because currently we are so much handicapped——

Mr. BISHOP. You are talking about the senior ROTC now?

Mr. JAMES. Yes, sir, the senior ROTC, yes, sir.

Mr. MURTHA. Mr. Visclosky.

Mr. VISCLOSKY. General, you had mentioned there is about 4,000 civilian employees in Iraq, if I remember your figure correctly, and they are all volunteers. Is there a problem as far as number of people you can get to volunteer on a civilian side? Is there some ceiling that necessitates more contractors?

General ROCHELLE. I am not aware of any difficulty we are having with our Department of Army civilians willing to volunteer to serve in Iraq, none whatsoever.

Mr. VISCLOSKY. Okay. Thank you very much. Thank you, Mr. Chairman.

Mr. MURTHA. General, I can see you are recruiting great because you are adamant about these bonuses. Bonuses up to $2 billion. I can tell that you defend the bonuses with passion and I appreciate that. What I can't understand is why everybody doesn't. Don't we have categories where we say, okay, this certain category gets a bonus, this category doesn't?

General ROCHELLE. We absolutely do, and I made a commitment to Ms. Kaptur to provide that, and I will provide that.

Mr. MURTHA. Thank you very much. The Committee will adjourn until tomorrow at 10.

[CLERK'S NOTE.—Questions submitted by Mr. Murtha and the answers thereto follow:]

INVOLUNTARY SERVICE

Question. There are several means that the Armed Forces use to retain personnel including stop loss authority. Stop loss is a management program that retains servicemembers beyond their contractually agreed-to separation date. Stop loss is most often invoked to stabilize unit integrity until the end of a combat tour. There are currently over 12,000 soldiers in the Army, Army Reserve and Army National Guard who remain on active duty beyond their scheduled separation date as a result of stop loss. To help ease the burden of those affected by stop loss, the FY2009 Defense Appropriations Act established and funded a new special pay of $500 per month for all servicemembers extended by stop loss during FY2009. To date no payments have been made and DOD officials concede that the Army will need to continue using stop loss through the end of 2009 or longer. Another method to retain personnel is the Individual Ready Reserve (IRR). An individual assigned to the IRR receives no pay and is not obligated to drill, conduct annual training, or participate in any military activities (except for periodic Muster activities) until activated by Presidential Reserve Callup Authority. Upon being called up, servicemembers will usually be screened for their medical and personal status in order to qualify or disqualify them for activation. During the process, IRR members who seek to delay, defer, or exempt their activations have the opportunity to present their case to the mobilization authority for a decision. The Army has used this policy as well.

Mr. James, Secretary Gates has been quoted several times stating that he would like to end stop loss completely. What policy steps are being taken to meet this goal?

Answer. The Army has recently announced its plan to reduce and eventually discontinue the use of Stop Loss. Key components of this plan include the following:

Active Army units deploying on or after 1 January 2010 will not be subject to Stop Loss. Army National Guard units mobilizing on or after 1 September 2009 will not be subject to Stop Loss. U.S. Army Reserve units mobilizing on or after 1 August 2009 will not be subject to Stop Loss.

Effective with units redeploying on or after 1 July 2009, the post-deployment stabilization period for Active Army units will be reduced from 90 days to 60 days. Soldiers will be released from Stop Loss 60 days after redeployment.

Units currently deployed and deploying prior to the above dates will remain subject to Stop Loss until they return from deployment and complete the post-deployment stabilization period. Soldiers subject to Stop Loss will be eligible for Stop Loss Special Pay, at a rate of $500 per month, once they are past their contractual Expiration Term of Service or approved retirement/separation date. Stop Loss Special Pay will be paid monthly until the Soldier is released from active duty, the Soldier

is retired or separated, or the Soldier takes action to reenlist or extend his or her service obligation. These payments began on October 1, 2008.

Question. Mr. James, in addition to the use of stop loss there was a recent article in the Washington Post (3/03/2009) regarding a mother who was recalled to active duty four years after separation from service. How many times has the Army used the Presidential Reserve Callup Authority in the past 5 years?

a. Mr. James, how many Soldiers has the Army recalled to service and what is their time commitment?

Answer. The Army has not used the Presidential Reserve Callup Authority in the past 5 years. The Army is mobilizing Reserve Soldiers under the Partial Mobilization Authority (10 U.S.C. 12302).

a. The Army has issued involuntary mobilization orders to 955 Soldiers as Individual Mobilization Augmentees (IMA). Additionally, the Army has issued involuntary mobilization orders to 13,718 Soldiers in the Individual Ready Reserve (IRR). Of these, 9,710 have reported for duty. The remaining Soldiers are waiting to report, have been granted a delay, have an exemption case pending, or have failed to report. The Army has not recalled any retired members to active duty involuntarily.

IMA Soldiers may be mobilized for 90 to 365 days, depending on the mission requirement. Prior to December 2006, the Army mobilized IRR Soldiers for a maximum length of 545 days. Beginning in December 2006, the Army reduced the maximum period of mobilization for IRR Soldiers to 365 days, which was then consistent with the Secretary of Defense's formal January 2007 mobilization guidance.

Question. Mr. James, do stop loss and IRR Soldiers count towards the end strength goal?

a. If so, what is the Army's current end strength minus those Soldiers?

Answer. Stop Loss Soldiers generally count against the overall strength for all components, unless they are members of a reserve component who have been called to active duty involuntarily.

IRR Soldiers who are mobilized involuntarily pursuant to 10 U.S.C. 12302 do not count against the active duty end strengths for any component; however, IRR Soldiers who are voluntarily ordered to active duty pursuant to 10 U.S.C. 12301(d) count against the maximum number of reserve component Soldiers who are permitted to be on active duty at any given time for the purpose of providing operational support. In addition, IRR Soldiers who are voluntarily ordered to active duty will count against the active duty end strengths if they are mobilized for a period of greater than three years or they serve cumulative periods of active duty that exceed 1,095 days in the previous 1,460 days.

a. As of the end of March, the active component strength was 548,894, with 6,420 Soldiers in a Stop Loss status. The Army's end strength minus these Soldiers is 542,474.

The United States Army Reserve (USAR) had strength of 204,716, with 685 Soldiers in a stop loss status and 4,262 involuntarily mobilized IRR Soldiers. The USAR's end strength minus these Soldiers is 199,769.

The Army National Guard (ARNG) had strength of 368,379, with 4,417 Soldiers in a stop loss status. The ARNG's strength minus these Soldiers is 363,962.

ANTI-DEFICIENCY ACT VIOLATION EXITING FY 2008

Question. In September 2008, the Army obligated $200 million more of military pay than was available in the Military Personnel, Army (MPA) account, and subsequently asked to transfer funds into the account to cover the difference. The Committee staff believes that the Army violated the Anti-deficiency Act (31 USC 1342). However, Army lawyers have opined that this is not the case.

The Anti-deficiency Act states:

"An officer or employee of the United States Government or of the District of Columbia government may not—(A) make or authorize an expenditure or obligation exceeding an amount available in an appropriation or fund for the expenditure or obligation."

In September 2008, was $200 million more obligated than available from the military personnel account?

Answer. There was no time, including September 2008, when obligations exceeded funds available in the fiscal year 2008 military personnel account. This determination is based on accounting reports prepared by the Defense Finance and Accounting Service.

Question. The Anti-deficiency Act is clear. It states that an employee may not make an obligation exceeding an amount available in an appropriation. On what basis did the Army determine the obligation of $200 million did not violate the Anti-deficiency?

a. What has your General Counsel written on this matter?

b. Has there been an investigation into this matter? If so, who conducted the investigation and what were the findings?

Answer. The Army did not make an obligation exceeding the amount available in the appropriation.

a. At no time did obligations exceed funds available in the fiscal year 2008 military personnel account. Consequently, there is no need for an Anti-deficiency Act investigation or General Counsel comment on this matter. The Army's internal review office reviewed bonus payments paid during the first quarter of fiscal year 2009 charged to the fiscal year 2008 account, and determined the charges were correct. These bonus payments were not visible to the Army Budget Office (ABO) through any automated system because payment procedures for enlistment bonuses are paper-driven and rely on soldiers to present proper paperwork upon arrival at the first duty station. This process resulted in some lagging payments that did not obligate and disburse until after 30 September 2008. The Army Audit Agency is currently performing an audit to determine the propriety of permanent change of station (PCS) obligations charged to the account. Audit results will be available in June. Similar to enlistment bonuses, PCS disbursements, in some cases, are not visible until after close of the FY. Although ABO recorded miscellaneous obligation documents (MODS) each month for PCS charges based on the number of moves anticipated multiplied times historical execution rates, actual charges from household goods vendors came in higher than anticipated starting in September 2008. Disbursement patterns closely mirrored FY 2007 levels until September 2008, at which point charges spiked and continued to remain above anticipated levels for several months. This spike was not visible until September accounting results posted in October 2008.

b. As there were no indications a violation occurred, an investigation has not been conducted; however, the Army is fully cooperating with the Surveys and Investigations Staff of the House Committee on Appropriations, which is making an inquiry into this matter.

Question. If the money was available in the Military Personnel account, why did the Army require a subsequent reprogramming of $200 million into the Military Personnel account?

Answer. Our outlay model assumed the 26 September payroll file contained all bonus payments, and pay-related adjustments applicable to the fiscal year 2008 account; however, payrolls processed after 26 September continued to include fiscal year 2008 bonus payments and pay adjustments. Additionally, the actual cost of permanent change of station (PCS) travel claims exceeded previous estimates. Although funds were available to cover outlays in the near term, these unanticipated charges required that an additional $200 million be provided to maintain the appropriation's solvency beyond December 2009.

Question. Gentlemen, the Committee hears that the Army will send a reprogramming request of up to $2.3 billion for the MPA appropriation for FY 2008. Is this true? If so, how is this possible? How is this not an ADA violation?

Answer. No. While the MPA appropriation may require an additional modest reprogramming for FY 2008 related to permanent change of station charges, a $2.3 billion reprogramming request has no factual basis.

Question. At the close of fiscal year 2007, the MPA appropriation had a surplus of funds and at the close of fiscal year 2008 the MPA appropriation was projected to exhaust all available funding. This was the second budget cycle in a row where the Army has failed to properly estimate its resource needs while preventing waste. Please explain the Army's budgeting practices and internal controls to monitor disbursements across the MPA appropriation.

a. Why were these internal controls unsuccessful in detecting this over obligation?

b. What actions is the Army taking to ensure that there is not a reoccurrence?

Answer.

a. There was no over obligation in FY2007 or FY2008. The surplus in FY 2007 was primarily attributable to the subsistence-in-kind account, which had no automated system in place to properly obligate food requisitions.

b. Since then, the Army has implemented the Army Food Management Information System (AFMIS) to obligate food requisitions at the point of order; however, there is still some risk in this account as AFMIS has not been deployed to theater sites. We manage this risk using a workaround process to manually obligated food orders received from theater. The issue in FY 2008 was unrelated to the subsistence-in-kind account. Rather, payroll cost modeling efforts failed to properly capture payments made during the 5th and 6th quarters (after fiscal year-end-close). The payroll cost model now has been properly adjusted. The MPA appropriation strives to close each fiscal year with as little unexpended balance as possible.

Question. The Army admitted recruits in 2005 through 2007 that were below standard. Interviews with Non-Commissioned Officers (NCO) revealed that they believe sub-standard soldiers end up in units and cannot be utilized, making it harder on that unit to accomplish its mission. In addition, the NCOs indicated that some new recruits are unable to pass a physical readiness test. The NCO's feel that the basic training course needs to be updated to provide the recruits skills they will need upon deployment to theater. Essentially, the NCOs believe the Army needs to get "harder" as new recruits lack discipline. In addition the NCOs feel that their influence to train and shape recruits has eroded. Data supports the NCOs assessment of overall quality. In June 2003 initial entry training (IET) attrition rates were 14.78%. In December 2007 the attrition rate for IET was 8.49%. In addition, for fiscal year 2008 only 83% of the Active Army recruits had high school diplomas, up from 79% the previous year. All recruit quality benchmarks were met by the active duty Navy, Air Force, and Marine Corps.

General Rochelle, please describe the training process for new Soldiers. At what point do Soldiers start to prepare for their combat mission?

a. Please explain the role of the NCOs in shaping Soldiers?

b. What recourse is available to Non Commissioned Officers (NCO) when Soldiers fail to reach the minimum standard?

Answer. Soldiers go through a training program that prepares them for duties in their first unit of assignment. The majority of Soldiers attend Basic Combat Training (BCT) or One Station Unit Training (OSUT) at one of four training centers within the Training and Doctrine Command. While at BCT, the individual receives physical training, military indoctrination, and training in universal Soldier skills, such as small arms and crew-served weapons, small unit tactics, combatives, and combat life saving measures. BCT is followed by Advanced Individual Training (AIT) to develop the Soldier's Military Occupational Specialty. AIT is branch specific skill training for a specialty, such as artillery, military police, signal, ordnance, personnel management, transportation, medical, or quartermaster. OSUT is unique because it combines both BCT and AIT at one training center and is focused on the combat arms branches, such as infantry, armor, or combat engineers.

Soldiers with recent prior military experience do not attend BCT or OSUT. Instead, these Soldiers attend the Warrior Transition Course at Ft. Sill, Oklahoma, where the skills they previously learned and used are refined, updated, and oriented toward current Army tactics, techniques, and procedures.

Soldiers begin to prepare for combat in the institutional training base where they are taught basic individual Soldier skills. When they arrive at a unit, they continue to prepare themselves for future combat missions by maximizing their opportunities for self-development in terms of mental, physical, and professional development. Additionally, Soldiers continue to train on the required individual skills and begin to train on collective tasks.

Soldiers prepare for their combat mission as part of a unit, based on their unit's Core Mission Essential Task List and/or Directed Mission Essential Task List, ultimately attaining the status of being ready for their combat mission.

a. Our non-commissioned officers are the linchpin in the development of our young Soldiers as individuals, as team or squad members, and as junior leaders. They mentor young Soldiers, inspire leadership, and instill discipline and professionalism. Non-commissioned officers are the principle trainers in our units. They take our young Soldiers from OSUT, BCT and AIT and transform them into members of teams and squads.

b. It is incumbent on NCOs to train their Soldiers to the established standards required for success on the battlefield. NCOs are required to counsel and administer corrective training to a Soldier who does not attain or maintain these standards. If a Soldier is unable to overcome performance shortfalls, the NCO can recommend to the chain of command that the Soldier be separated from the service or reclassified to another military occupation specialty. In some instances, retraining or disciplinary action may be sufficient to assist the Soldier in attaining and maintaining the minimum standards.

Question. Mr. James, what is the current percentage of Army recruits with high school diplomas?

a. How many waivers were granted to recruits and what is the most common waiver granted?

b. What is the attrition rate for recruits without high school diplomas?

c. Mr. James, has the Army performed any analysis on the conduct of these recruits? Are discipline issues more frequent in this group?

Answer. In FY08 the percentage of Regular Army Non-Prior Service recruits with Tier I (High School Diploma Graduate) credentials was 82.8%.

a. In FY08 the Army granted 19,202 Regular Army Non-Prior Service waivers; the most common waivers granted were for conduct (9,229). When reviewing waiver requests, the Army considers evidence of the applicant's character and potential for service. This evidence might include employment history, school records, and references from teachers, coaches, clergy, or others who know the person well. Most waivers are needed to address a single instance of immaturity that the applicant has overcome. Evidence of remorse and changed lifestyle weigh heavily in waiver decisions.

b. A recent Tier II Attrition Screen (TTAS) report completed by the United States Army Accessions Command indicated the Tier II (Non-High School Diploma Graduate/Alternate Credential Holder) 36-month attrition rate was 33.5% and the Tier I 36-month attrition rate was 20.1% for the FY05 cohort.

c. A longitudinal study is being conducted. In general, recruits granted waivers are high quality and perform well. Their education and aptitude are higher on average. Soldiers who enlisted with a conduct waiver in recent years train and perform better than those without waivers initially. Indiscipline rates and first term attrition are slightly higher for recruits with conduct waivers.

Question. General Rochelle, please explain Initial Entry Training (IET) for soldiers. What are the basic skills that soldiers learn while at IET?

a. What training is required beyond IET?

b. Are Soldiers coming to units fully trained to meet the needs for deployment or does training take place with the unit as well?

Answer. Soldiers go through a training program that prepares them for duties in their first unit of assignment. The majority of Soldiers attend Basic Combat Training (BCT) or One Station Unit Training (OSUT) at one of four training centers within the Training and Doctrine Command. While at BCT, the individual receives physical training, military indoctrination, and training in universal Soldier skills, such as small arms and crew-served weapons, small unit tactics, combatives, and combat life saving measures. BCT is followed by Advanced Individual Training (AIT) to develop the Soldier's Military Occupational Specialty. AIT is branch specific skill training for a specialty, such as artillery, military police, signal, ordnance, personnel management, transportation, medical, or quartermaster. OSUT is unique because it combines both BCT and AIT at one training center and is focused on the combat arms branches, such as infantry, armor, or combat engineers.

Soldiers with recent prior military experience do not attend BCT or OSUT. Instead, these Soldiers attend the Warrior Transition Course at Ft. Sill, Oklahoma, where the skills they previously learned and used are refined, updated, and oriented toward current Army tactics, techniques, and procedures.

A few of the basic skills taught include warrior skills, such as marksmanship, communications, urban operations, small unit tactics/techniques/procedures, first aid, hand-to-combat, basic survival skills, and battle drills. Other tasks include drill and ceremony, how to wear a uniform, physical training, values and ethos training, leadership cooperation, chains of command, equal opportunity, and Military Occupational Skill specific training.

a. Usually, no additional training is "required" after IET before assigning Soldiers to units. However, certain specific duty positions may require additional training after IET before a Soldier is assigned, e.g., airborne duty positions.

b. Soldiers departing the Training Base for their first unit of assignment possess most of the basic universal and technical skills necessary to begin the process of integrating into any unit across the Army, refining their individual skills, and learning their collective tasks. No matter how good a new Soldier is when he or she arrives at the Soldier's first unit, training must take place to integrate the new Soldier into the unit and make the Soldier a part of a team before deployment. This process occurs with every move that a Soldier makes between units.

Question. General Rochelle, if Soldiers are deploying to Iraq or Afghanistan do they train with the same equipment they will use when deployed?

Answer. Soldiers generally train with the same equipment they will use when they deploy, provided that the items were already assigned to the unit. However, there are instances where certain low-density, high-demand items specific to Iraq or Afghanistan, or unique to particular missions in theater, were fielded directly to theater. In these instances, either new equipment training teams conducted training with the incoming unit as it took possession of equipment, but before it began conducting missions with the new equipment, or the incoming unit received training on the new equipment from the outgoing unit prior to assuming the mission. Examples of equipment that was fielded directly to theater include mine-resistant armored protected vehicles, special armored security and route-clearing vehicles, vehicle-mounted counter remote-controlled improvised explosive device systems, special

radios, the most recent versions of the Army Battle Command system (Command Post of the Future), and intelligence and biometric systems.

To the extent supportable, the Army brings newly fielded items back to home stations and Combat Training Centers to make them available to units prior to their next deployment.

Question. What sort of physical conditioning is done to prepare Soldiers for deployment?

Answer. The Army Physical Fitness School at Fort Jackson, South Carolina, has researched our physical fitness doctrine and found our current model, which emphasizes aerobic and muscular endurance, does not correlate well with the physical fitness requirements of current combat operations. To address this shortcoming, the Physical Fitness School drafted a new doctrine called Army Physical Readiness Training (Field Manual (FM) 3–22.20) that aligns with our current operations and training doctrine. The Army's Training and Doctrine Command has already posted the draft manual on the Army Knowledge Online (AKO) website for use by our leaders and Soldiers, and expects final approval to occur later this year.

The new Army Physical Readiness Training focuses on improving Soldiers' aerobic endurance, muscular strength, muscular endurance (anaerobic endurance), power, and movement proficiency, which physically prepares Soldiers and units to meet the physical demands of full spectrum operations. As this new doctrine is inculcated throughout the Army, we will adjust our physical fitness test to reflect this change.

Prior to the release of our new doctrine, many units across the Army, with the assistance of subject matter experts, have adopted a variety of injury prevention and performance enhancement programs. For example, Special Forces and several Brigade Combat Teams have implemented programs that, in addition to traditional aerobic exercise, emphasize core strengthening, short term bursts of power, and speed and agility drills. Army training policy continues to highlight that commanders are the primary training managers and trainers for their organization, and are responsible for building readiness for mission requirements. Although the Army no longer designates a unit fitness trainer, unit commanders rely on non-commissioned officers (NCOs) as primary unit fitness trainers since they are the primary trainers of enlisted Soldiers, crews, and small teams. This responsibility is also outlined in our new doctrine.

Additionally, prior to deployment, Soldiers actually wear their gear with increasing frequency to build physical endurance and fortitude for long-duration missions.

Question. How is physical fitness maintained once the unit has deployed?

Answer. Many Soldiers maintain fitness through the routine execution of rigorous combat operations on difficult terrain and under various, often heavy loads. Physical Training (PT) programs vary by location and mission. Most locations offer access to a variety of physical fitness equipment and facilities. Units have a variety of PT plans based on mission, time, and troops available. Soldiers have also demonstrated remarkably innovative methods of constructing PT equipment and facilities in austere conditions. In addition, much of the Army's Physical Fitness Training Manual (FM 21–20) is dedicated to exercises that can be performed without the use of equipment, such as partner resisted exercises and calisthenics.

Question. How does the Army prepare for high altitude operations such as those they will perform in Afghanistan?

Answer. The Army prepares Soldiers to conduct high-altitudes operations by ensuring they are in the best physical condition possible prior to deploying to Afghanistan. Soldiers conducting rigorous and holistic physical fitness training will more readily adapt to the demands of high-altitude operations. While units may not have the opportunity to train in mountainous areas, Soldiers can and do conduct physical training wearing their combat gear, conduct road marches over uneven terrain, and negotiate obstacles while wearing their equipment. High-altitude oxygen levels are difficult to replicate prior to arriving in theater, but the Soldiers adjust their physical conditioning activities upon arrival in theater to further improve themselves prior to assuming their mission.

Question. What sort of physical conditioning is done to prepare Soldiers for the heavy loads they will have to carry in Afghanistan and Iraq during home station training?

Answer. Mission and mission circumstances vary considerably. The Army relies on unit leaders to prepare their Soldiers for the demands of their assigned missions. To condition Soldiers for the rigors of carrying heavier loads, most units will invest additional time in more comprehensive physical fitness opportunities, such as weight training, obstacle courses, combative activities, and timed distance marches over uneven terrain with equipment. For example, Special Forces and several Brigade Combat Teams have implemented programs that, in addition to traditional aerobic exercise, emphasize core strengthening, short term bursts of power, and

speed and agility drills. Army policy (Army Regulation 350–1) directs unit commanders to conduct regularly scheduled (at least 3 to 5 times per week), vigorous physical fitness training during the unit's normal duty day. Army policy also requires that exercise periods be conducted with sufficient intensity, frequency, and duration to maintain adequate cardio-respiratory endurance, muscular strength and endurance, flexibility, and body composition. Additionally, rather than just emphasizing aerobic and muscular endurance, the new draft Army doctrine, Army Physical Readiness Training (FM 3–22.20), which is already posted on Army Knowledge Online (AKO) website, focuses on improving Soldiers' aerobic endurance, muscular strength, muscular endurance (anaerobic endurance), power, and movement proficiency, which physically prepares Soldiers and units to meet the physical demands of full spectrum operations.

GROW THE ARMY

Question. In January 2007, the President requested, from Congress, an increase of 74,200 in Army end strength across the Active, Guard and Reserve components. The main goal of "Grow the Army" was to provide additional ground forces to meet strategic demands and mitigate persistent capability shortfalls, and reduce stress on soldiers and their families due to ongoing combat operations in Iraq and Afghanistan. With the Committee's support ($2.1 billion since 2007 (including both Army and Marine Corps funding), the Army has been extremely successful in achieving this growth. The Army anticipates that this growth should be achieved two years ahead of schedule. However, recent news articles have reported that the Army believes it needs an additional 30,000 troops to meet the current demands. This is a daunting number since the fiscal year 2009 personnel costs (all services) are a staggering $153 billion.

What is the number of Army National Guard and Army Reserve soldiers currently on active duty in support of the mobilization and what is the Army's current mobilization cap?

Answer. As of 31 March 2009, the USAR had 25,527 Soldiers in a mobilized status. Of this total, the USAR had 9,542 Soldiers in an Active Duty for Operational Support (ADOS) status, with a statutory cap of 13,000. The ARNG had 62,944 Soldiers in a mobilized status. Of this total, the ARNG had 17,562 Soldiers in an ADOS status, with a statutory cap of 17,000.

Question. Currently, what is the monthly "burn rate" for your personnel costs?

Answer. The MPA appropriation burn rate for October 2008 through March 2009 is $3.9 billion. The burn rate from January 2009 through March 2009 is $4.1 billion, which includes pay raises.

Question. When do you anticipate the military personnel accounts will exhaust all funds?

Answer. The base and bridge MPA appropriations has adequate funding to cover payroll that will disburse on 1 July 2009; however, we do not expect to have adequate funding to cover payroll that will disburse on 15 July 2009.

RECRUITING AND RETENTION

Question. A key principle of the U.S. Armed Forces is to attract and retain competent personnel to assure readiness and operational effectiveness. The Army has generally met its aggregate recruiting and retention goals. In some cases, the Army has lowered recruiting standards and increased the amount of enlistment and reenlistment bonuses. However, with the deteriorating economy many troops are electing to stay in the Army and more civilians are looking to join the Army. Recruiting always remains a challenge, but a tighter job market provides more opportunities for the Army to appeal to young men and women. Many factors beside bonuses are appealing to soldiers and recruits, such as a 32 percent increase in military pay since 2001, compared to 24 percent for the general population, the new GI bill and job security. This appears to be a good time to reduce enlistment and reenlistment bonuses as well as return standards back to higher levels.

The Committee remains concerned regarding the recruitment and retention for mission-critical occupational specialties. Has the Grow the Army recruitment helped fill the critical specialties.

a. If not, what steps are being taken to fill the specialty occupations?

Answer. The Grow the Army initiative has had a minimal impact on filling critical specialties. The Army has garnered its greatest success using targeted incentives to fill critical specialties. Incentives help the Army channel quality recruits to required critical MOS's by offering seasonal and targeted bonuses to fill training seats at the right time. With OSD approval, the Army recently launched a pilot program entitled

Military Accessions Vital to the National Interest (MAVNI), which could prove beneficial in filling critical shortages in health care professions and language specialties.

Question. Has the Army analyzed why these occupational specialties have consistently been under-filled? What is the operational impact of these shortages? What resources are needed to fill these positions?

Answer. The Army routinely analyzes the health of every Military Occupational Specialty and the determinants affecting our ability to recruit and retain. Recruitment and Retention incentives are periodically adjusted to influence fill rates of critical specialties. The protracted conflict has resulted in shortages in certain critical occupational specialties, which impacts our ability to offer optimal levels of dwell time to our troops. To remedy this, the Army will require continued funding of enlistment bonuses and educational incentives to attract quality applicants into critical occupational specialties.

Question. Recruiting and retention goals are often relayed to Congress in the aggregate, providing little or no visibility into how each occupational specialty is staffed. Please provide the Committee with details on recruiting and retention by Military Occupational Specialty (MOS).

a. Can you also provide the average bonus of each MOS?

Answer:

Recruiting: The model the Army uses to determine staffing levels of the 149 occupational specialties the Army currently recruits for, are staffed based on priority. Priority is largely driven by propensity for deployment and utilization. Not all specialties are filled to 100% of authorizations. Some are filled above 100% to support the ongoing contingency operations. The attached report provides specifics on each MOS. Specialties, strength and organizational structure drive the level of staffing; this in turns drives recruiting, retention and training requirements. The average enlistment bonus for a minimum term of service in each named skill at the start of fiscal year 2009 is attached.

Retention: The Army's retention mission is not based on MOS; Army missions by category*. The mission is distributed among eighteen separate commands according to their percentage of the eligible population. The Army utilizes individual career branches at Human Resources Command to manage MOS strength in conjunction with nonmonetary and monetary reenlistment options.

*The three categories are:

Initial Term: Soldier serving on an initial term of active federal military service, or a Soldier who has previously served less than 180 cumulative days on active duty.

Mid Career: Soldier on a second or subsequent period of active Federal military service who will have 10 or less years of active federal military service on his or her separation date or at ETS.

Careerist: Soldier on their second or subsequent enlistment who will have more than 10 years active federal military service at ETS or on their separation date.

The Army's FY09 Retention mission by category and command is:

Command	Initial	Mid	Career	Total
AMC	2	14	22	38
ARCENT	31	66	65	162
ARSOUTH	19	49	30	98
ATEC	0	3	8	11
CIDC	25	56	65	146
EUSA	293	609	333	1,235
FORSCOM	12,561	13,796	6,395	32,752
INSCOM	403	515	203	1,121
MDW	151	134	57	342
MEDCOM	641	1,359	723	2,723
NATO	7	62	48	117
NETCOM	345	607	257	1,209
TRADOC	397	1,837	2,481	4,715
USAREUR	1,693	1,754	762	4,209
USARPAC	1,608	1,253	546	3,407
USASOC	1,071	978	650	2,699
USMA	3	8	5	16
OTHER	0	0	0	0
ARMY	19,250	23,100	12,650	55,000

Average reenlistment bonus by MOS:

MOS	Avg SRB	MOS	Avg SRB	MOS	Avg SRB	MOS	Avg SRB
09L	$12,833	19D	$9,828	35G	$15,392	68W	$10,257
11B	10,533	19K	10,028	35H	13,140	74D	10,384
11C	10,235	21b	10,215	35L	12,522	79R	11,905
13B	9,862	21C	11,765	35M	17,373	89A	9,700
13D	10,312	21D	15,500	35N	15,304	89D	15,029
13F	10,423	21P	14,068	35P	14,828	92F	9,417
13M	9,576	21Y	8,432	35S	16,153	92W	10,085
13P	10,049	25B	10,864	37F	17,433	94A	11,517
13R	11,479	25L	9,092	38B	19,290	94H	10,533
13S	7,878	25N	10,238	42R	9,628	94S	14,938
14J	10,115	25P	12,388	46Q	8,907	94T	12,714
14S	11,505	25Q	11,012	46R	9,579		
15D	7,780	25R	10,550	51C	9,500		
15J	10,215	25S	13,188	62B	9,935		
15Q	10,344	25U	10,261	63H	10,372		
18B	18,963	25V	8,865	63J	9,256		
18C	17,625	27D	10,392	63M	9,881		
18D	17,813	31D	18,371	68K	13,245		
18E	18,691	31E	12,146	68S	9,689		
18F	20,000	35F	13,612	68T	9,395		

Ave ENL BONUS	MOS Title
20000	INTERPRETER/TRANSLATOR FT. JACKSON
2000	INFANTRY RECRUIT
10000	CANNON CREWMEMBER
20000	FIELD ARTILLERY AUTOMATED TACTICAL DATA SYSTEM SPECIALIST
2000	FIRE SUPPORT SPECIALIST
2000	(MLRS) HIGH MOBILITY ARTILLERY ROCKET SYS (HIMARS) CREWMEMBER
10000	MULTIPLE LAUNCH (MLRS) OPERATIONAL FIRE DIRECTION SPECIALIST
20000	FIELD ARTILLERY FIREFINDER RADAR OPERATOR
2000	FIELD ARTILLERY SURVEYOR
	FA METEOROLOGICAL CRMBR
15000	PATRIOT FIRE CONTROL ENHANCED OPERATOR MAINTAINER
10000	AIR DEF CMD, COMMO, COMPUTER, INTEL TAC OPS CENTER OPER/MAINTAINER
	AIR AND MISSILE DEFENSE (AMD) CREWMEMBER
10000	PATRIOT LAUNCHING STATION ENHANCED OPERATOR/MAINTAINER
	AIRCRAFT POWERPLANT REPAIRER
	AIRCRAFT POWERTRAIN REPAIRER
	AIRCRAFT ELECTRICIAN
	AIRCRAFT STRUCTURAL REPAIRER
	AIRCRAFT PNEUDRAULICS REPAIRER
10000	OH–58D ARMAMAENT, ELECTRICAL, AVIONIC SYS REPAIRMAN
	AVIONIC MECHANIC
	AVIATION OPERATIONS SPECIALIST
10000	AIR TRAFFIC CONTROL OPERATOR
	AH–64 ATTACK HELICOPTER REPAIRER
	OH–58D HELICOPTER REPAIRER
	UH–60 HELICOPTER REPAIRER
	CH–47 HELICOPTER REPAIRER
	AH–64D ARMAMENT, ELECTRICAL, AVIONIC SYSTEMS REPAIRMAN
	20000 SPECIAL FORCES RECRUIT
	CAVALRY SCOUT
2000	M1 ABRAMS ARMOR CREWMAN
2000	COMBAT ENGINEER
2000	BRIDGE CREWMEMBER
	DIVER
4000	HEAVY CONSTRUCTION EQUIPMENT OPERATOR
	PLUMBER
	FIREFIGHTER
	INTERIOR ELECTRICIAN
	TECHNICAL ENGINEERING SPECIALIST
	CONCRETE AND ASPHALT EQUIPMENT OPERATOR
	CARPENTRY AND MASONRY SPC
15000	TERRAIN DATA SPECIALIST
4000	NETWORK SWITCHING SYSTEMS OPERATOR/MAINTAINER

Ave ENL BONUS	MOS Title
	CABLE SYSTEMS INSTALLER MAINTAINER
	MULTIMEDIA ILLUSTRATOR
4000	NODAL NETWORK SYSTEMS OPERATOR
25000	MICROWAVE SYSTEMS OPERATOR MAINTAINER
20000	MULTICHANNEL TRANSMISSION SYSTEMS OPERATOR MAINTAINER
5000	VISUAL INFORMATION EQUIPMENT OPERATOR/MAINTAINER
25000	SATELLITE COMMUNICATION SYSTEMS OPERATOR/MAINTAINER
15000	SIGNAL SUPPORT SYSTEMS SPECIALIST
	COMBAT DOCUMENT PRODUCTION SPECIALIST
10000	PARALEGAL SPECIALIST
	MILITARY POLICE
	RADIO OPERATOR-MAINTAINER
2000	INTERNMENT RESETTLEMENT SPECIALIST
2000	MILITARY INTELLIGENCE SYSTEMS MANITAINER/INTEGRATOR
	UNMANNED AERIAL VEHICLE OPERATOR
4000	PSYCHOLOGICAL OPERATIONS SPECIALIST
	HUMAN RESOURCES SPECIALIST
	HUM RES INFO SYS MGT SPEC
	BAND MEMBER
	METAL WORKER
	FINANCIAL MANAGEMENT TECHNICIAN
	MACHINIST
	SMALL ARMS ARTY RPMN
4000	FIRE CONTROL REP
	ARMAMENT REP
20000	JOURNALIST
5000	BROADCAST JOURNALIST
	UTILITIES EQUIP RPMN
	POWER GENERATOR EQUIPMENT REPAIR
	CHAPLAIN ASSISTANT
	CONSTRUCTION EQUIP REP
	ABRAMS TANK SYSTEM MNTNR
	LIGHT WHEELED VEHICLE MECHANIC
	SP FLD ARTY SYS MECH
	TRACKED VEHICLE REPAIRER
10000	QM AND CHEM EQUIP REPAIR
10000	BRADLEY FIGHTING VEHICLE SYSTEM MAINTAINER
	INFORMATION TECHNOLOGY SPECIALIST
2000	CHEMICAL, BIOLOGICAL RADIOLOGICAL AND NUCLEAR (CBRN) SPECIALIST
	CARGO SPECIALIST
	WATERCRAFT OPERATOR
	WATERCRAFT ENGINEER
20000	MOTOR TRANSPORTATION OPERATOR
	TRANSPORT MGMT COORD
	AMMUNITION STOCK CNTRL
	AMMUNITION SPECIALIST
25000	EXPLOSIVE ORDNANCE SPEC
	BIOMEDICAL EQUIPMENT SPECIALIST
	OPERATING ROOM SPECIALIST
	DENTAL SP
	PATIENT ADMINISTRATION SPECIALIST
	OPTICAL LAB SPC
	MEDICAL LOGISTICS SPECIALIST
5000	MEDICAL LABORATORY SPECIALIST
	NUTRITION CARE SPECIALIST
	RADIOLOGY SP
	PHARMACY SPECIALIST
	VETERINARY FOOD INSP SPEC
	PREVENTIVE MEDICINE SP
	ANIMAL CARE SPECIALIST
4000	HEALTH CARE SPECIALIST
	MENTAL HEALTH SPECIALIST
	AUTOMATED LOGISTICAL SPECIALIST
20000	PETROLEUM SUPPLY SPECIALIST
10000	FOOD OPERATIONS SPECIALIST
	PETROLEUM LAB SP

Ave ENL BONUS	MOS Title
	MORTUARY AFFAIRS SP
10000	PARACHUTE RIGGER
	SHOWER, LAUNDRY AND CLOTHING REPAIR SPECIALIST
2000	WATER TREATMENT SPECIALIST
	UNIT SUPPLY SPECIALIST
20000	LAND COMBAT EL MSL SYS RP
	ATC EQUIPMENT REPAIRER
20000	RADIO COMSEC REPAIRER
15000	COMPUTER DETECTION SYSTEMS REPAIRER
5000	TMDE MAINT SUPPORT SPEC
4000	APACHE ATTACK HEL SYS REP
10000	AVIONIC COMM EQUIP REP
5000	RADAR REPAIRER
4000	MULTIPLE LAUNCH ROCKET SYSTEMS REPAIRER
	AVIONIC AND SURVIVABILITY EQUIPMENT REPAIRER
20000	PATRIOT SYSTEM REPAIRER
	AVENGER SYSTEM REPAIRER
10000	INT FAM TES EQUIP OPER
2000	INTELLIGENCE ANALYST
2000	IMAGERY ANALYST
15000	COMMON GROUND STATION (CGS) ANALYST
	HUMAN INTELLIGENCE COLLECTOR
10000	SIGNALS INTELLIGENCE ANALYST
30000	ELECTRONIC WARFARE SIGNAL INTELLIGENCE RECRUIT
2000	SIGNALS COLLECTOR ANALYST

ENLISTMENT AND RETENTION BONUSES

Question. The military services offer a variety of enlistment and re-enlistment bonuses to attract new recruits into military specialties that are considered "hard to fill," as well as to encourage experienced military members in "shortage jobs" to stay in past their first enlistment period . The Army has more enlistment incentives than any of the other military services. Programs include Enlistment, Overseas Extension, and Reenlistment bonuses. Bonus levels are in constant flux.

Mr. James, what was the total for Army recruiting and retention bonuses for FY 2009?

Answer. The Army anticipates $2.2 billion in FY09 Recruiting and Retention for all three Components.

Question. Mr. James, what is the range of individual bonuses for recruiting?

a. For retention? Please, indicate why there are differences?

Answer. Recruiting bonuses range from as low as $2,000 up to the statutory limit of $40,000. Bonuses for skills vary greatly depending on shortages in the particular skill and mission requirements. As of March 1, 2009, 45 of 149 skills receive a cash incentive.

a. The Army uses monetary incentives to retain quality Soldiers in critical and hard-to-fill skills as a means to manage and shape the force. Bonus amounts are adjusted based on the criticality of an MOS. The Army currently uses the following bonuses as part of the Army's Retention Program:

Selective Reenlistment Bonus (SRB): Currently the SRB is used for skills identified as critical Army-wide. The program offers from $1K to $12K for Soldiers in select skills, while Soldiers in special critical skills can receive up to $27K.

SRB-Deployed: The SRB Deployed program offers Soldiers deployed to Afghanistan, Iraq, and Kuwait up to a maximum of $9.5K.

Critical Skills Retention Bonus (CSRB): The CSRB currently targets seasoned, combat veterans to stay in the ranks beyond retirement eligibility offering a lump sum bonus based on the Soldier's length of commitment to serve. The program is currently paying Soldiers in SOF skills a maximum payment of $150K for a six-year commitment. 6 additional skills can receive a maximum payment of $50K to $100K for a six-year commitment (The total number of CSRB takers averages less than 700 per year).

Question. Gentlemen, have you found any imbalances or inequities in your recruiting and retention bonus structure?

Answer. The Army has not identified any inequities or imbalances in our recruiting and retention bonus structure. The recruiting incentives structure is reviewed quarterly to determine if imbalances or inequities exist and to correct any problems found. The Army makes a concerted effort to target high quality recruits and to in-

sure marketing efforts are targeted to diverse populations of potential applicants in urban, suburban and rural areas.

The Army continually measures the effectiveness of retention incentives offered and makes adjustments as necessary. As the strength of a critical MOS improves, bonuses tend to be reduced. While Soldiers who reenlist may perceive inequities between recruiting and retention bonuses, it is important to keep in mind that the Army uses recruiting and retention incentives to shape the force and improve strength in critical MOSs. The SRB Program is reviewed quarterly to adjust retention incentives as necessary. The end result is an effective and efficient balance of resources to support the retention mission and manpower requirements.

Question. Gentlemen, since the Army is about to reach the Grow the Army end strength goal and more people seem to be willing to join the Army because of the state of the economy, will the Army reduce the amount it provides for bonuses?

Answer.

Recruiting: Through refinement of the Active Army enlistment bonus payment schedule, bonuses for specialties that had received bonuses during fiscal years 2005–2007 were reduced approximately 20% for fiscal year 2009 and 2010. The savings resulting from this precision bonus management tool will be approximately $65M per year through fiscal year 2011. Reliance on seasonal bonuses which were required to fill short term training seats has been curtailed in favor of building a long term Delayed Entry pool. Seasonal bonuses, which previously ranged up to $20,000 per new recruit have been cut nearly in half and will be used less frequently. The savings from this change will result in nearly $35M per year in expected bonus savings in fiscal year 2010 and beyond.

Retention: The Army continues to measure the effectiveness of retention incentives offered. While the economy plays a part in a Soldier's decision to reenlist, it is not the only reason. The reenlistment bonus not only provides an incentive to Soldiers in shortage critical skills MOSs to reenlist; it also encourages them to reenlist earlier and for longer periods of service. Accordingly, the Army has steadily decreased the SRB amounts paid per Soldier for the past year that reenlistments increased. The Army has reduced maximum SRB payments from a high of $40,000 to $27,000. The average SRB payment has been reduced from $12,900 to $10,387. The Army's newest SRB message reduces bonus amounts by 23% across all bonus zones and removes an additional 15 skills form the bonus list.

Question. Mr. James, at a time when the Army is having unprecedented success at retaining its soldiers, especially in view of the new, flexible GI Bill and the job security that military service holds, is the Army reviewing its recruiting and retention bonus program?

Answer.

Recruiting: The Army, with the assistance of researchers from RAND and the Army Research Institute is working to refine and integrate bonus prediction models that will enhance current bonus payment procedures. The goal is precision recruiting in key critical skills and demographic areas needed to effectively man the force. Existing internal models are also undergoing revision to provide a more precise and cost effective methodology in filling critical training seats and to attract prospects in higher mental and educational categories. The Army expects to implement the new and refined methodology in late fiscal year 2009 for fielding during fiscal year 2010 and beyond.

Retention: Reenlistment options and bonuses are used as incentives to shape the force. Current incentives are achieving mission success in every category. The Army conducts quarterly reviews of retention incentives. The strength and criticality of each MOS is reviewed in detail during the quarterly reviews. Current and projected strengths, as well as future requirements, are carefully considered. While the strength and criticality of each MOS is reviewed in detail, the overall retention incentive program is also reviewed to ensure the Army is leveraging all available incentives to achieve cost savings while at the same time meeting Army requirements. The Army will fully incorporate the transferability aspect of the Post 9/11 GI Bill into all retention incentive reviews.

Question. Mr. James, is the Army going to promote non-monetary bonuses such as tuition assistance and the new G.I. Bill?

Answer. The Army plans to fully promote the new GI Bill, tuition assistance, and other non-monetary incentives to the maximum extent feasible.

Question. Mr. James, can you provide the Committee with a complete list of all recruitment and retention bonuses for each MOS that is eligible for a bonus?

Answer.

Recruiting: Current Recruiting Bonuses:

The Army pays enlisted recruiting bonuses at 4 bonus levels. Each bonus level varies by years of service.

Level 1
3 Years: $15K, 4 Years: $20K, 5 Years: $25K, 6 Years: $35K
MOS: 09L, 13R, 25P, 25Q, 25S, 35W, 89D (7 MOS)
Level 2
3 Years: $10K, 4 Years: $15K, 5 Years: $20K, 6 Years: $25K
MOS: 13D, 13P, 35H, 46Q, 88M, 92F, 94A, 94E (8 MOS)
Level 3
3 Years: $3K, 4 Years: $10K, 5 Years: $15K, 6 Years: $20K
MOS: 13B, 13F, 13S, 14E, 14J, 14T, 21Y, 25F, 25U, 27D, 35N, 42R, 94M (13 MOS)
Level 4
3 Years: $2K, 4 Years: $4K, 5 Years: $5K, 6 Years: $10K
MOS: 11X, 18X, 19K, 21E, 25N, 35G, 35T, 63J, 63M, 68K, 92G, 92R, 92W, 94D, 94F, 94S, 94Y (17 MOS)

Retention. Current Retention Bonuses: The Army pays reenlistment bonuses by zone and grade.

SELECTIVE REENLISTMENT BONUS

Up to $9,500	*Deployed SRB:* Soldiers regardless of MOS or ETS serving on active duty in Afghanistan, Iraq, or Kuwait in support of Operation Enduring Freedom or Operation Iraqi Freedom.
$12,000	*Critical Skill SRB:* Soldiers in the following MOS: 11B, 11C, 13B, 13D, 13F, 13M, 13P, 13R, 13S, 14J, 14S, 15D, 15J, 15Q, 19D, 19K, 21B, 21C, 21D, 21Y, 25B, 25L, 25N, 25P, 25Q, 25R, 25S, 25U, 25V, 27D, 31D, 31E, 35F, 35G, 35H, 35M, 35N, 42R, 46R, 62B, 63H, 63J, 63M, 68K, 68S, 68T, 68W, 74D, 79R, 92F, 92W.
$15,500	*Location SRB:* Soldiers reenlisting for all Airborne Positions, Special Ops Command, 75th Ranger Regiment, 160th SOAR, Guantanamo Bay Cuba, 4TH BCT 25ID, and in the following MOS: 11B, 13F, 15U, 25B, 25C, 25N, 25R, 25U, 27D, 31E, 35F, 42A, 46R, 56M, 68S, 68W, 74D, 88M, 92F, 92G, 92Y.
$27,000	*Special Critical Skill SRB:* Soldiers in the following MOS: 09L, 11B, 18B, 18C, 18D, 18E, 18F, 21D, 21P, 25L, 25R, 25S, 27D, 35G, 35H, 35L, 35N, 35P, 35S, 37F, 38B, 46Q, 51C, 79R, 89A, 89D, 94A, 94H, 94S.

CRITICAL SKILLS RETENTION BONUS

Up to $50,000	21P, 25S, 37F, 38B.
Up to $100,000	35P (AD, AQ, AZ, DG, CM, PF, JN, PU, PV, PW, RU), 89D.
$150,000	18B, 18C, 18D, 18E, 18F, 18Z, SQI ''T''.

ARMY EXPERIENCE CENTER/VIRTUAL ARMY EXPERIENCE

Question. There are two entities where the Army uses video games to attract recruits: the Virtual Army Experience (VAE) and the Army Experience Center (AEC). The VAE is a traveling exhibit that has been touring the country stopping at amusement parks, air shows and county fairs. The AEC is located in Philadelphia and is a two-year pilot program focused on transforming the Army's marketing and recruiting business model. The AEC opened its doors on August 29, 2008. The Army uses both the VAE and the AEC to collect information from people who play the games. The Army believes this is an innovative way to reach a new audience. But critics do not like the idea of the military using videogames as a recruiting tool.

To participate in the VAE and AEC, visitors must be at least 13 years old, which is 4 years below the legal recruitment age of 17. Many of the gaming activities are rated T for Teen by the Entertainment Software Rating Board (ESRB). Visitors must register and provide their age and basic contact information which the Army says will be used to send information about upcoming AEC and VAE events. What is not clear is whether these updates include recruitment information to those who register.

Gentlemen, the AEC is a two year pilot. Does the Army have plans to make the AEC permanent?

a. What has the AEC done to help recruiting?

Answer: The Army will continue to evaluate the AEC over the remainder of the pilot period to determine which elements are most appropriate for wider deploy-

ment. We intend to retain the AEC in Philadelphia as an experimental marketing and recruiting platform.

a. The AEC is designed as an experimental platform to pilot alternative marketing and recruiting techniques and tools. There are many innovations developed at the AEC, including interactive touch screen career and benefits exploration displays; a state of the art recruiter automation software application that promises to improve recruiter productivity while substantially reducing IT costs; and a blended civilian/military workforce that relieves Army Soldiers of administrative workload, resulting in significantly improved recruiter productivity. These innovations have the potential to significantly change the Army's recruiting business model to make it less labor intensive and more efficient. In addition to these business process improvements, the AEC has developed innovative community outreach programs that may have potential for replication in other locations. For example, the AEC hosts a high school credit recovery program in partnership with the School District of Philadelphia. The program is currently at capacity with 96 students enrolled and hundreds more waiting for space. The AEC also hosted an African American History Month leadership forum that brought 150 inner city youths into dialogue with African American leaders from the community and the Army. The AEC is also piloting the use of social networking to build a community of interest in a local market.

Question. The minimum age requirement for both the AEC and VAE is 13. What steps are taken to verify the age of those who wish to take part in the activities?

Answer. The AEC requests photo identification to verify age. If photo ID is unavailable the AEC requests parental verification, either in person or telephonically.

Question. The VAE and AEC both collect information from those who visit for updates regarding the VAE and AEC. Please explain how the Army uses this information?

a. How is the information provided by those under the recruitment age used?

b. Please explain what type of information is included in the updates that are sent to those who are registered.

Answer. The VAE and AEC operate under the same procedures as all Army recruiting activities. All visitors register to enter the VAE or AEC. This registration data is forwarded to Army Accessions Command where registration information for visitors age 17 and older may be employed, depending upon visitor interests and attributes, as contact information for a mailing, phone contact or email regarding Army career opportunities. In some cases, this information may also be used to forward visitor photos or other visitor requested information.

a. Information for visitors age 13 to 16 is saved until visitors reach age 17, at which time this information may be used as discussed above. The AEC has recruiters on staff, but they do not operate according to traditional recruiting business practices. The AEC tests the hypothesis that raising awareness of Army opportunities is sufficient to generate enlistments so the recruiters in the AEC do not engage in traditional telephone or face-to-face prospecting. They only follow up with prospects who specifically request additional information. For those who are under the recruitment age, their information is used strictly to notify registrants of upcoming activities in the AEC.

b. During registration at the AEC we ask visitors if they would like to receive information about upcoming events, such as technology displays, guest speakers, or Local Area Network (LAN) tournaments. Those registrants who indicate a desire to receive such communications will typically receive an email notifying them about upcoming activities. They will not be contacted by a recruiter.

[CLERK'S NOTE.—End of questions submitted by Mr. Murtha.]

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