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**BEFORE THE**

**AIR AND LAND FORCES SUBCOMMITTEE  
HOUSE ARMED SERVICES COMMITTEE  
UNITED STATES HOUSE OF REPRESENTATIVES**

**ON ARMY FORCE PROTECTION PROGRAM**

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Chairman Abercrombie, Ranking Member Saxton, and distinguished members of the committee: on behalf of the Army, thank you for the opportunity to appear before you today and to update you on Army force protection programs. Force protection continues to be the Army's highest priority. We are working hard to enable our Soldiers and those who lead them to accomplish their mission successfully and return home safely. As we stated previously, the death of one Service member reflects an immeasurable loss to the Nation in terms of his or her life's potential. We never lose sight of this, and we never stop trying to protect our forces better. Congressional funding has allowed the Army to enhance force protection and field improved equipment for our greatest asset, the United States Soldier. Improvements and fielding have been accomplished while we are simultaneously fighting a determined enemy. Thank you for your ceaseless support; it is making a tremendous difference in the protection of our Soldiers.

The battlefield has changed from being linear with relatively defined boundaries between front and rear areas to one that is asymmetrical, a battlefield with no front lines. Every Soldier in theater has to be prepared to shoot, move, and communicate in this dynamic environment. The ever-evolving enemy continues to develop increasingly sophisticated and complex weapons to attack our forces at perceived weak spots. As stated at the outset, the Army's number one priority is the protection of the Soldier.

Since our last update in June 2006, we have initiated joint programs with the Marines to develop an interim solution for the tactical wheeled vehicle challenge via the Mine Resistant Ambush Protection vehicle (MRAP). We are partnering with industry to move forward faster on these initiatives so that we can field MRAP starting this summer and the long-range solution, the Joint Light Tactical Vehicle (JLTV) as soon as possible. We are also preparing for increased troop levels in Iraq and need to ensure that we can continue to leverage the Rapid Fielding Initiative to provide all Soldiers in theater with individual force protection equipment, including enhanced small arms protective inserts as part of the Integrated Body Armor ensemble.

Jointly with the Marine Corps, we are in the process of rapidly acquiring Mine Resistant Ambush Protected (MRAP) vehicles. MRAP fills a near-term, urgent joint service requirement for enhanced crew protection. The MRAP program will rapidly field highly survivable, mobile, multi-mission vehicles to the Joint Force to meet urgent operational requirements. MRAP vehicles are commercial, off-the-shelf solutions. The

MRAP has a V-shaped hull that provides an immediate and dramatic increase in underbody protection for Soldiers. MRAP vehicles are inherently offensive in character, built from the ground up to survive a combination of mines, rocket propelled grenades, and small arms fire and would enhance our Soldiers' ability to conduct independent operations in a survivable vehicle. The services have documented a requirement for 6,465 MRAP vehicles. On November 9, 2006, the U.S. Army and U.S. Marine Corps released a competitive Request for Proposals (RFP). In late January 2007, the services will award contracts to those with the greatest likelihood of meeting requirements. Testing is expected to take place from February through May 2007. The Army and Marines will place production orders with those contractors whose MRAP vehicles best meet survivability and other performance requirements in testing and have the capability to meet an aggressive production and delivery schedule. Delivery is projected to begin in fourth quarter FY2007. Concurrently, the Army will continue to work with the Marines to develop a long-term solution through the Joint Light Tactical Vehicle (JLTV) program.

To date, the industrial base has been increasingly responsive in meeting requirements for Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Our Original Equipment Manufacturers (OEMs) have been teaming with other manufacturers to increase capacity wherever possible. Additionally, the Depots have been responsive to numerous armoring efforts, such as the Objective Gunner's Protection Kit, to provide an increased production capacity. With the increased requirement of the Mine Resistant Ambush Program (MRAP) and the Family of Mine Protected Vehicle Program of Records we are beginning to see some capacity issues, but until the competitive contracts are awarded we will not know the full impact.

The new ventures that we are aggressively pursuing continue our focus on protecting the Soldier, our highest priority. The Army's framework for force protection is a system-of-systems approach that integrates layers of protection for our Soldiers. The layers begin at the individual level, followed by the vehicle platform, countermeasures (CM), situational awareness (SA), and lethality. Force protection starts with individual equipment, such as the advanced combat helmet, ballistic eyewear, hearing protection, night vision devices, M-4 carbine rifle, fire resistant uniforms, and integrated body armor with enhanced small arms protective inserts, deltoid auxiliary protectors, and side armor plates. The next layer of protection incorporates the use of armored vehicles such as the up-armored HMMWV (UAH) with fragmentation protection kits, the armored security

vehicle (ASV), and the Mine Resistant Ambush Protected Vehicle (MRAP). Protection is further layered through the use of tactical unmanned aerial vehicles like the Raven, route clearance equipment such as the Buffalo, the Husky, the RG-31, and the Cougar, and counter-measures like Counter Remote Control IED Electronic Warfare (CREW) devices and Counter Rocket and Mortar (C-RAM) surveillance equipment. Protection is layered even further through the use of increasingly sophisticated command, control, and communication systems like the Land Mobile Radio (LMR), the Joint Nodal Network (JNN) and Blue Force Tracker, which provide our Soldiers the ability to maintain enhanced situational awareness on the battlefield. The Army makes use of intelligence gathering efforts to help prevent the execution of enemy attacks. JNN helps to provide the band width to bring key intelligence capabilities to the battalion level. Finally, these layers of Soldier protection are integrated through the development of appropriate tactics, techniques, and procedures (TTPs), based on lessons learned, which are rehearsed through realistic training. Our commanders and Soldiers in theater not only rely on equipment and armor protection, but realize that force protection requires the integration and application of all of these capabilities to reduce vulnerability to attacks in an asymmetric threat environment.

The first time Soldiers use force protection equipment should not be after they deploy to a combat zone, but while they are performing pre-deployment training at their home station. Thanks to your support, throughout calendar year 2006 we fielded more essential equipment earlier in unit training timelines facilitating good pre-deployment training. When TTPs are rehearsed and reinforced through training, Soldiers respond in a moment of hazard with an absolute, immediate reaction that will save his/her life or that of a buddy or comrade. Units in theater are continuously adapting and evolving their TTPs to counter enemy tactics. These TTPs are being captured by the Center for Army Lessons Learned and used in pre-deployment training at home station. Furthermore, all Army units are conducting live, virtual, and constructive pre-deployment training at home station and at our training centers using the most current lessons learned provided by units currently operating in theater.

Commanders also make use of Operational Needs Statements (ONS) to request material solutions to correct a deficiency or improve on a capability that impacts mission accomplishment. In the fall of 2006, HQDA developed and instituted a fully automated ONS request, sourcing, and tracking system to fully support warfighter needs. The

Army processes approximately 500 requests for 250,000 individual items each year. As soon as resources are identified, we expedite the materials to the field as quickly as possible. The process optimally takes 35 to 42 days from request to sourcing solution. However, when developmental items are requested, time taken to develop and field a new program, system, or material solution is additive to this time. The Joint Urgent Operational Needs Statement is another expression of urgent needs that are handled within the Joint Command and Staff communities. An example of an Operational Needs Statement currently in the system is the request for replacement of current up-armored HMWWVs with a new generation of vehicles, which we are addressing through the MRAP and JLTV programs.

As demonstrated by our use of lessons learned and Operational Needs Statements, we are constantly seeking methods to improve each layer of force protection. The enemy continually works to identify and exploit our vulnerabilities. Our challenge is to identify and then address these efforts through a combination of TTP and materiel changes. Since our last update to the committee in June 2006, the Army continues to make substantial progress. We would like to provide you an update on our ongoing efforts to improve force protection.

In addition to the advanced combat helmet, night vision goggles, and the M4 carbine, the Army provides every Soldier in Theater with Integrated Body Armor (IBA). IBA remains a centerpiece program for the Army; it saves lives everyday. IBA is a modular design that provides protection against fragmentation and small arms ammunition. The standard system consists of an Outer Tactical Vest (OTV) and a set of ballistic inserts known as Small Arms Protective Inserts (SAPI). The Enhanced Small Arms Protective Inserts (ESAPI) provides increased ballistic protection. Additional protection is provided through the Deltoid Auxiliary Protector (DAP), which provides protection to the shoulder and armpit regions of the body, and Ballistic Side Plates. Here is a brief chronology of the evolution of Interceptor Body Armor (IBA):

- In 1999, the Army started fielding the Outer Tactical Vest (OTV) with Small Arms Protective Inserts (SAPI) to Soldiers Deployed in Bosnia.
- In April 2004, Coalition Forces Land Component Command requested the Deltoid Auxiliary Protector (DAP).
- In April 2004, Coalition Forces Land Component Command reported 100 percent fill for both OTV and SAPI requirements.

- In January 2005, the Coalition Forces Land Component Command requested Enhanced Small Arms Protective Inserts (ESAPI).
- In September 2005, Coalition Forces Land Component Command requested Ballistic Side Plates.
- In January 2006, Coalition Forces Land Component Command reported 100 percent fill for ESAPI.
- In January 2006, the Army started fielding Enhanced Side Ballistic Inserts to Theater.
- In December 2006, Coalition Forces Land Component Command received 100 percent fill for Enhanced Side Ballistic Inserts.

Table 1 shows the Army and Theater wide requirements for the Interceptor Body Armor ensemble.

**TABLE 1**

<b>Interceptor Body Armor Item</b>	<b>Army Acquisition</b>	<b>Validated Theater Requirement</b>	<b>O/H in Theater</b>	<b>Total # Funded</b>
Advanced Combat Helmets (ACH)	1,197,150	230,000	*	1,197,150
Outer Tactical Vests (OTV)	966,000	201,000	201,000	966,000
Small Arms protective Inserts (SAPI)**	966,000	**	*	520,000
Enhanced SAPI (ESAPI)**	966,000	201,000	*	642,000
Deltoid Auxiliary Protector (DAP)	966,000	247,860	247,860	451,000
Side Armor Plates	966,000	230,000	230,000	546,000

Notes: \*Soldiers deploy from home station to the theater with this equipment. Sustainment quantities are available in Theater.

\*\*SAPI is no longer in production. ESAPI replaced SAPI in the IBA ensemble because it offers improved protection.

The domestic body armor industrial base is currently robust and fully capable of meeting all Army requirements. The Army is producing 20,000 sets of ESAPI per month and currently fielding ESAPI to next deployers at home station. Table 2 shows the program schedules for each component of IBA. (Numbers in the “Total Fielded” column are current as of 31 December 2006.)

**TABLE 2**

<b>Interceptor Body Armor Item</b>	<b>Total Army Requirement</b>	<b>Program Schedule</b>	<b>Produced</b>	<b>Total # Funded</b>	<b>Total Fielded</b>
Advanced Combat Helmet (ACH)	1,197,150	30,000/Mo	844,984	1,197,150	844,984
Outer Tactical Vests (OTV)	966,000	0	966,000	966,000	966,000
Enhanced SAPI	966,000	20,000/Mo	462,000	642,000	462,000
Deltoid Auxiliary Protector (DAP)	966,000	20,000/Mo	271,000	451,000	271,000
Side Armor Plates	966,000	30,000/Mo	276,000	546,000	276,000

We are currently developing interim improvements to our body armor toward the Next Generation Body Armor. These interim modifications, which include enhanced individual Soldier mobility, ease of medical access, reduced weight, increased ballistic protection, improved comfort, and improved weight distribution of ballistic and fighting load components, are expected to begin fielding by the first quarter of FY2008. The Army continuously evaluates industry designs for the Next Generation Body Armor; with sufficient advancement in technology, fielding may begin as early as FY2010.

Another aspect of the individual layer of protection that has assisted in saving lives is the ability to provide life-saving first aid. Hemostatic bandages are one of the greatest lifesavers of the modern battlefield. Hemostatic bandages help stop arterial bleeding in places where tourniquets are not totally effective such as the upper thigh, the abdomen or if an arm is severed at the shoulder. Hemostatic bandages provide a critical layer of force protection by helping first responders such as combat lifesavers and combat medics control the bleeding of wounded soldiers until they can be safely evacuated to advanced medical and surgical facilities. Last year we spent approximately \$20 million fielding bandages and plan to spend approximately \$28 million on bandages this year.

We are continuing to provide and upgrade the protection for our Soldiers while conducting their missions by way of armoring the vehicles they ride in. Over 78 percent of the theater's demands for the up-armored HMMWV (UAH) and Armored Security Vehicle (ASV) have been filled. Use of unarmored vehicles is strictly limited to secure forward operating bases. We project being able to fulfill armor requirements for UAHs in theater with third quarter FY2007 production; vehicles will arrive in theater by fourth quarter FY2007. We expect to fulfill theater demand for the ASV with fourth quarter FY2007 production; vehicles will arrive in theater by first quarter FY2008.

Ongoing and future armoring programs for the UAH include the production and installation of fragmentation protection kits, each of which provide increased survivability. Production of fragmentation kit #1 was completed in fourth quarter FY2006 and fragmentation kit #2 was completed in first quarter FY2007. As of the end of first quarter FY2007, we had installed over 80% of the theater's demands for fragmentation kits #1 and #2. We are in the process of fielding fragmentation kit #5, which provides increased survivability through enhanced armor protection. Fragmentation kit #5 was produced in support of an Operational Needs Statement (ONS) from the theater. Production of interim fragmentation kit #5 was completed in fourth quarter FY2006, and we have installed over 87% of the theater's demands. We are in the process of producing and installing the objective fragmentation kit #5. We are also in the process of producing and installing the Objective Gunner's Protection Kit (O-GPK), which is an upgrade to the current GPK and includes transparent armor for enhanced situational awareness while providing protection for the Soldier.

To further enhance the protection of Soldiers inside the UAH, numerous safety improvements have been made to improve crew survivability from vehicle accidents and roll-overs. The enhancements range from improved seat belts, gunner's restraints, vehicle intercom systems, and a vehicle fire suppression system designed to mitigate the after effects of an IED attack. Production of over 71,000 safety enhancement kits is complete and all requirements are met, minus the fire suppression system. The fire suppression system is scheduled to be completed by first quarter FY2008. Similar fire suppression systems and gunner's restraint systems are designed for the heavy tactical vehicle fleet. The Army is also expanding its use of uniforms made of flame retardant material. The Army has shipped 71,000 fire resistant uniforms to theater so that Soldiers riding in convoys have additional protection against the possibility of sustaining burn injuries. The Army has plans to ship an additional 93,000 by third quarter FY2007 in order to fulfill theater demand.

Table 3 lists the current status of our route clearance platforms. These vehicles have proven to be highly effective. Their modular design helps us to quickly repair and return these vehicles to operation following battle damage. These vehicles were designed specifically for an environment where mines and improvised explosive devices would be deployed. The unique V-shaped hulls, high stand-off and armor body provide for excellent protection. As the threat has grown, the Army has responded by



increasing the force protection levels through the use of spall liners, bar/slat armor, and improved gunner protection kits. In FY2006, the Army received \$200M to purchase 153 route clearance vehicles. In FY2007, the base budget and bridge supplemental provided \$223M for additional route clearance vehicles, which will add 174 vehicles toward meeting theater demands.

**TABLE 3**

<b>SYSTEMS</b>	<b>TOTAL REQUIRED</b>	<b>QTY FUNDED</b>	<b>PRODUCTION COMPLETION DATE</b>	<b>TOTAL PRODUCED</b>
BUFFALO	85	85	MAY 07	66
HUSKY	79	79	JUN 07	62
RG-31	321	321	JUN 07	146
COUGAR	125	125	NOV 06	121

In the area of command and control and especially tactical communications, the Army is making great strides. The Army began fielding the Land Mobile Radio (LMR) in second quarter FY2007. Over the next 18 months, we will field 58,000 radios to individual soldiers. The LMR provides a secure, lightweight solution to improve increased intra-squad communications for the dismounted Soldier. The Single Channel Ground and Airborne Radio System (SINCGARS), is our critical secured, tactical FM radio. In FY2006, we fielded 50,000 radios, allowing us to provide the required communication capabilities for convoy support. Also, as our industrial base continue its strong support. Reserve Component forces are receiving radios to fill their shortages so that they can better support Homeland Defense missions and assist with natural disasters. In FY2006, we fielded 20,000 radios to the Guard and Reserve. Finally, the Army continues to rapidly expand fielding of the mission critical Joint Network Node, which provides a suite of voice, video, and data communication tools designed to meet Division, Brigade and Battalion Command Post structures. To date the Army has fielded Joint Network Node (JNN) equipment to seven divisions, two Stryker Brigades, one Expeditionary Signal Battalion (ESB), and five ARNG Brigade Combat Teams. Through FY2008, the Army plans to field additional JNN equipment to two divisions, three ARNG Brigade Combat Teams, one Stryker Brigade Combat Team, two Combat Aviation Brigades, six ESBs, and four fires brigades. By the end of FY2008, JNN will be fielded to approximately 50 percent of the total force.

The integration of multiple layers of protection has resulted in fielding enhanced equipment to provide the best protection for the Soldier and meet the Combat Commander's requirements. Our goal is to provide equipment to Soldiers as soon as possible prior to deployment. In the past, equipment was issued to soldiers as they went to the staging base in Kuwait, just before they took part in one last training exercise. Our current ability to provide equipment 45 days before a unit conducts a Mobilization Rehearsal Exercise is a tribute to the success of funding and providing the quantities of equipment needed for the force. We would like to continue to increase the available time that Soldiers have to train with this equipment to enhance their proficiency in developing and refining the TTPs that will enhance their survivability and protect Soldiers' lives on the battlefield.

All Soldiers in Brigade Combat Teams and Military Transition Teams deploy with the most modern equipment available in the Army inventory. Through the success of the Rapid Fielding Initiative (RFI) program, every Soldier in theater is equipped with individual force protection equipment. Through the success of the Rapid Equipping Force (REF), we have been able to take advantage of Commercial off the Shelf (COTS) capabilities in acquiring components for programs such as the Joint Network Node (JNN) and armored vehicle solutions. We still confront some force protection risks related to the armoring of our tactical wheeled vehicles. We are taking several actions to mitigate these risks, to include our recent partnering with industry to expedite the development of new solutions. When necessary, we cross-level equipment between deploying units and those returning to or at home station. We collaborate with all commands, the Army Guard, and the Army Reserve through the Army Equipping and Reuse Conference to ensure that each unit entering theater has the best equipment available and that those who respond to homeland defense and security missions have the equipment necessary to complete their missions.

Given the National Guard's role as both an operational force and the States' first military responder for homeland defense and civil support, the Army is committed to resource the Army National Guard consistent with those roles. The Army Reserve remains the Nation's First Title 10 responder to provide assistance in serious natural or manmade disasters, accidents, or catastrophes that occur in the United States and its territories. We must now equip all units, Active and Reserve Component, with night vision goggles, crew served weapons, radios, and other critical items to survive on

today's asymmetric battlefield. We have also instituted a process to use all available equipment in the Army inventory, whether new or used, to fill formations for all components of the total force. As a result of the Army Equipping and Reuse Conference (AERC) 6.0 in first quarter FY2007, we accomplished the distribution of \$38.8 billion of equipment to Active and Reserve Component formations over FY2007, FY2008, and first quarter FY2009 (compared to \$22 billion in AERC 5.0). This includes \$10.6 billion of equipment for the Army National Guard and \$2.5 billion of equipment for the Army Reserve. We delivered equipment earlier than 45 days prior to final mission rehearsal exercises for 85% of our managed items, and we are approaching our goal of delivering equipment earlier than 90 days prior to final mission rehearsal exercises.

As we continue to fulfill the challenging missions given the Army, we are dependent on your continued support. While we are growing the Army in this time of war, ramping up production to accommodate the growth of the total Army will be a major effort. Further, given the Reserve Components' new role as an operational rather than strategic force, we confront even more challenges by increasing the demand for equipment and resources.

As we look to fiscal year 2008 and beyond, we must fully resource the Army to grow while it modernizes and transforms to meet the challenges of the future. Our need for continued Congressional support is vital. Soldier survivability has increased substantially with the provision of force protection solutions. We need your continued help in two areas: the provision of predictable, sufficient, and stable funding and the continued support of American industry. Predictable budgets, enacted early with distribution of both main and supplemental funding within 30 days of the start of the fiscal year, allow us to generate efficiencies when working with industry, to provide stability to our work force, and to save dollars in the procurement process. Sufficient budgets provide the financial resources needed to meet the missions we are being asked to do as well as the resources needed to restructure, reposition, and equip the force for the next mission. Stable budgets allow us to manage our resources within a predictable band as envisioned through our planning and programming processes as well as provide needed flexibility to respond to evolving operational needs. Finally, continued support from American industry will enable us to rapidly develop and field new equipping solutions.