

DEPARTMENT OF DEFENSE APPROPRIATIONS
FOR 2010

HEARINGS
BEFORE A
SUBCOMMITTEE OF THE
COMMITTEE ON APPROPRIATIONS
HOUSE OF REPRESENTATIVES
ONE HUNDRED ELEVENTH CONGRESS
FIRST SESSION

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**DEPARTMENT OF DEFENSE APPROPRIATIONS
FOR 2010**

THURSDAY, MARCH 19, 2009.

AFRICOM

WITNESSES

**GENERAL WILLIAM E. WARD, USA COMMANDER, UNITED STATES AF-
RICA COMMAND**

MARY PLEFFNER, DEPARTMENT OF COMMERCE

JERRY LANIER, DEPARTMENT OF STATE

OPENING STATEMENT

Mr. BISHOP. The subcommittee will come to order.

Good morning. This morning the committee will hold a hearing regarding the United States Africa Command, AFRICOM. We are pleased to welcome General William Ward, AFRICOM's commander.

General, thank you for your service, and thank you for being here this morning. You have had a long and distinguished career. I will just say to the committee that I was extremely proud to be able to witness the excitement when you received your four stars. So it is a very special privilege to have you here and to welcome you to the subcommittee.

With AFRICOM fully functional for 6 months, this hearing offers a timely opportunity for the subcommittee to get an update on how the stand-up of this new command is progressing and on the challenges and opportunities it is confronting in Africa.

For too long, the United States has paid Africa very little attention, focusing on the continent only long enough to respond to crises. Within the Department of Defense, the responsibility for Africa has heretofore been divided among three separate commands: European Command, Central Command and Pacific Command. With everyone responsible for Africa, no one was responsible for Africa. U.S. attention to the continent has been uneven, inconsistent and poorly organized to adequately anticipate, prevent, or respond to the crises on the continent.

Africa occupies about 3½ times the size of the land area of the Continental United States. It is home to nearly 900 million people and 53 nations. It is rich in human and natural resources, and Africa's strategic importance has never been more obvious than it is today, a fact that the United States has been somewhat late in recognizing.

Over the last decade, China, Iran and al Qaeda have all made significant and growing investments in Africa. It is in this context

that AFRICOM was conceived to create one unified command, to maintain a consistent focus, and to coordinate DOD policy toward the vast and increasingly important continent. But AFRICOM, the debut of the Africa Command, has not gone smoothly.

First, in the context of the U.S. invasion of Iraq, a lack of outreach to African leaders allowed suspicion to grow with potential African partners who feared that AFRICOM was the first step toward the establishment of a large, permanent U.S. troop presence on the continent. Not surprisingly, only one African nation, Liberia, publicly expressed its willingness to host AFRICOM's headquarters, which are still located in Stuttgart, Germany. No government agreed to host any one of the five regional integration teams—the small, lightly staffed mini-headquarters that would have allowed AFRICOM to maintain closer, more consistent contact with African leadership.

Second, unfortunately, the Rumsfeld Pentagon declared that AFRICOM would be taking the lead on all U.S. policy toward Africa. That was a stance that was not only untrue, but it was also unhelpful in persuading the Department of State and the U.S. Agency for International Development (USAID) to share with AFRICOM the advice and expertise that AFRICOM has sought from those interagency partners.

Finally, AFRICOM's purpose, mission and organization were not adequately explained to this body to assuage the concerns that the new combatant command was not just one more in a long line of instances where the Department of Defense was taking over the responsibilities that rightly belonged to the State Department.

Questions from members of the committee will very likely address these issues and many others, and I think that we can look forward to a very interesting and useful question-and-answer session.

General, before we hear your testimony, I would like to call on the Ranking Member, my good friend and mentor, Mr. Bill Young, for any comments that he would like to make.

REMARKS OF MR. YOUNG

Mr. YOUNG. Mr. Chairman, thank you very much.

I want to welcome General Ward here.

This is a very important issue. Africa is a very important part of the world, and our presence there is extremely important. I know the General knows that at one point, there were those in the Congress who thought that the Africa Command should be disbanded and eliminated. We resisted that because we think it is important. The work you do is very, very important, and is good for the United States and for our relationship with the African communities.

So, General, thank you for being here today, and we appreciate the good work that you are doing.

Mr. BISHOP. Thank you, Mr. Young.

General Ward, please proceed with your summarized statement. Your entire statement, of course, will be placed in the record.

SUMMARY STATEMENT OF GENERAL WARD

General WARD. Well, Congressman Bishop, thank you very much, sir, and it does seem like almost 3 years ago when I pinned on the fourth star. It was only yesterday, but in other respects, it seems an eternity ago. Three years, in fact, has not gone by quickly.

Mr. Young and distinguished members of the committee, I appreciate the opportunity to provide this overview of the United States Africa Command. With me today are Ms. Mary Pleffner from our Department of Commerce as well as Mr. Jerry Lanier from our Department of State.

Today Africa Command is executing our mission of conducting sustained security engagement through military-to-military programs and military-sponsored activities to promote a stable and secure African environment. We work in concert with other U.S. Government agencies as well as with international partners to ensure that our activities are harmonized. Our strategy is based on military-to-military efforts to enhance the security capability and the capacity of our African partners.

In many engagements with African leaders during my time as commander of U.S. Africa Command and previously as deputy commander for the United States European Command, the consistent message that they gave me is their intent for African nations to provide for their own security. Most welcome our assistance in reaching their goals for security forces that are legitimate and professional, that have the will and means to dissuade, deter and defeat transnational threats, to perform with integrity, and that are increasingly able to support international peace efforts.

We work as a part of the overall United States Government effort. We work closely with the Department of State, with the Chiefs of Mission and country teams, with the United States Agency for International Development, with the Departments of Treasury, Commerce, Homeland Security, Agriculture, and other agencies that do work on the continent. Like Secretary Gates and Admiral Mullen, I fully support enhancements to the capabilities of our interagency teammates.

Similarly, we reach out to international partners, including Europeans, international organizations, nongovernmental organizations, private organizations, and academia. Their perspectives on the situation in Africa are valuable. The United States Africa Command is involved in military training, education, sustainment, and logistic support among other activities that occur throughout our area of responsibility.

The Combined Joint Task Force—Horn of Africa, headquartered in Djibouti, conducts training, education and civil military assistance that helps prevent conflict and promote regional cooperation among nations of eastern Africa.

Operation Enduring Freedom, Trans-Sahara, is the military component of the Department of State's counterterrorism partnership with North and West Africa nations.

Africa Endeavor is an annual communications and interoperability exercise that this year will include 23 African nations. We support the State Department's African Contingency Operations Training and Assistance, (ACOTA) that trains, roughly, 20 battal-

ions of peacekeepers a year. The peacekeepers have deployed to United Nations and African Union missions across the continent. Recently, we have helped deploy Rwandans and some of their cargo to the United Nations' mission in Darfur. Continuing deployments of the Africa Partnership Station provide training to the navies and coast guards of maritime nations in the Gulf of Guinea and the East Coast of Africa, helping them better secure their own territorial waters.

Given the lack of infrastructure within Africa and the island nations, our sustainment infrastructure, forward operating sites and en route infrastructure are vital. I endorse upgrades to these activities and in keeping these key infrastructure nodes in service. The enduring presence at Camp Lemonier in Djibouti makes possible our engagement in East Africa and in other parts of the continent as well as supports our U.S. strategic goals in that part of the world.

It is my honor to serve with our uniformed and civilian women and men of the Department of Defense as well as our interagency teammates who are making a difference on the continent every day. Their dedicated efforts are a testament to the spirit and determination of the American people and our commitment to contributing to the well-being and security of our Nation and the people of Africa.

Again, thank you for your support, and I look forward to further participation in this important hearing. Thank you, sir.

[The statement of General Ward follows:]

HOUSE DEFENSE APPROPRIATIONS SUBCOMMITTEE

STATEMENT OF

GENERAL WILLIAM E. WARD, USA

COMMANDER,

UNITED STATES AFRICA COMMAND

BEFORE THE HOUSE DEFENSE APPROPRIATIONS SUBCOMMITTEE

ON

19 March 2009

HOUSE DEFENSE APPROPRIATIONS SUBCOMMITTEE

HOUSE DEFENSE APPROPRIATIONS SUBCOMMITTEE - WRITTEN STATEMENT
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INTRODUCTION

It is my privilege as Commander of United States Africa Command to present to Congress our Posture Statement for 2009. The men and women of U.S. Africa Command have ensured the successful, rapid, and on-schedule activation of our nation's newest Unified Command--the sixth geographic command within the Department of Defense (DOD). The establishment of U.S. Africa Command provides a single focus for all DOD activities in Africa, and today we conduct sustained security cooperation programs in support of U.S. foreign and national security policy on the African continent and its island states.

Unified Command Status (UCS) on 1 October 2008 was possible due to the extraordinary efforts of our impressive team. By UCS, a total of 172 missions, activities, programs and exercises were effectively transferred to U.S. Africa Command from U.S. European Command, U.S. Central Command and U.S. Pacific Command. I am grateful for the sustained congressional support to U.S. Africa Command during its formative time, and I thank you for your continued support as we prepare to meet future challenges.

Development, diplomacy, and defense programs are integrally linked, and U.S. Africa Command is implementing the National Defense Strategy's vision of a *new jointness* by supporting and improving collaboration with other agencies and departments across our Government, as well as improving coordination with international, intergovernmental, and nongovernmental organizations. We achieve the greatest effect for our nation when we coordinate and harmonize our collective efforts in support of our common objectives.

Africa is on a positive course in reducing conflict, building democratic institutions, and promoting sustainable livelihoods for its people, but in each of these areas, the hard-won gains are fragile. Strengthening African security, both in individual nations and regionally, is necessary for its communities to flourish. I am convinced that building African security capability and capacity is the best path to assisting the people of Africa to achieve long-term stability and security.

In the months since UCS, U.S. Africa Command has been serving the interests of our nation, while also addressing the security and stability challenges confronting our African partners. In this report, I provide a brief overview of the strategic environment in Africa, explain our strategy, and underscore how our coordinated security assistance efforts are promoting stability in Africa in support of U.S. foreign policy objectives.

STRATEGIC ENVIRONMENT

The U.S. Africa Command's area of responsibility (AOR) presents difficult security challenges that should be viewed along with the opportunities available to the people of Africa. These challenges are juxtaposed against abundant natural resources that, if properly managed by

African states and institutions, can provide great economic and social benefits to all Africans. Our task is to assist our African partners so that they can provide for their own security in ways that permit realization of their capacity and potential.

Africa is a complex environment requiring a new and different approach. Its unique challenges demand a long-term rather than a near-term focus. For example, two of the most demanding challenges for African coastal nations are the security of their territorial waters and the regulation of their fishing industries. Today, the waters off Africa's west coast are being over-fished at an alarming rate by a variety of entities aware of Africa's inability to monitor and regulate this activity in their economic zone. If this continues, some forecasters predict that the ecological system that supports the fish population, the primary source of protein for many African states, could fail by 2045. Without the ability to secure their maritime spaces and regulate fishing, the nations of Africa will lose this important source of food and revenue for their people. The United States must adopt a long-term view towards creating programs that will help solve such problems. Failing to do so today means our activities will only produce short-term effects.

Political Geography

The greatest security threats facing Africa include enduring conflicts, illicit trafficking, territorial disputes, rebel insurgencies, violent extremists, piracy, and illegal immigration. While rich in both human capital and natural resources, many African states remain fragile due to corruption, endemic and pandemic health problems, historical ethnic animosities, natural disasters, and widespread poverty. Compounding these challenges, difficulties imposed by geography, climate, and a lack of infrastructure are hindering states' efforts to develop in an ever-globalizing international environment.

Despite these difficulties, a holistic picture of Africa taken over time shows some progress and significant promise. Six major wars have ended in the past seven years (Liberia, Democratic Republic of the Congo, Angola, Burundi, Sierra Leone, and the North-South conflict in Sudan). Democracy is growing in Africa, with more than 60 elections in the past six years. Almost three-quarters of Sub-Saharan nations are now classified by Freedom House as "Free" or "Partly Free"--up from less than half in 1990. Though the global economy is enduring a down-turn, previous economic growth on the African continent was at an eight year high, and 20 countries have registered positive growth for each of the past five years. Growth in real per capita income was over 3 percent in 2008--a marked change from the declines in growth across the continent in the 1980s and 1990s. Still, the amount of human suffering directly attributable to conflict on the African continent is unacceptably

high, and the 2009 Freedom House report on Sub-Saharan Africa notes that, "[O]verall, Africa has seen notable increases in freedom over the past generation, but has experienced some troubling setbacks in recent years."

In addition, African states are working hard to develop their own ability to deal with security challenges. Today Africans are sharing the burden of international peace and security by supplying 32 percent of United Nations (UN) peacekeeping forces worldwide. As of March 2009 there are more than 33,000 African peacekeepers deployed in support of UN and African Union (AU) peacekeeping missions. Five African countries--Nigeria, Rwanda, Ghana, Ethiopia, and South Africa--rank amongst the top 15 UN troop contributing nations.

Although Africa is on a positive trajectory, progress remains fragile and easily reversible.

Demographic Trends

Africa has the world's highest birth rates and the largest percentage of projected population growth. The continent's population of over 900 million is growing by approximately 2.4 percent annually and is projected to double by 2050. Today, 43 percent of Sub-Saharan Africa's population is below the age of 15. Rapid population growth and this "youth bulge" exceed most governments' ability to provide basic services and the capacity of their growing economies to provide jobs. This pool of undereducated and unemployed youth present a potential source of social and political instability.

Africa has experienced large migration flows in recent decades, often in response to economic problems, civil unrest, or natural disasters. Africa generates 49 percent of the world's internally displaced persons (IDPs). Many migrants settle in urban slums, further straining government services and contributing to the spread of infectious disease. Rapid urbanization also increases competition for limited jobs, housing, food, and water.

Transnational Threats and Crime

The United States and many of our African partners face a number of transnational threats in Africa. Violent extremism, piracy, and illicit trafficking are enabled by or directly contribute to instability. Somalia, Sudan, and vast open areas of countries across the Sahel region provide sanctuary for violent extremists. Al-Qaeda increased its influence dramatically across north and east Africa over the past three years with the growth of East Africa Al-Qaeda, al Shabaab, and Al-Qaeda in the Lands of the Islamic Maghreb (AQIM). At the same time, the general level of support for violent extremism among most Muslims in Africa remains very low.

Other trends pose serious challenges to U.S. interests. Foreign fighter recruitment and support networks are present across northern and eastern Africa, assisting extremists fighting coalition and government forces in Iraq, Afghanistan, and Pakistan. Vast coastal areas provide havens for smuggling, human and drug trafficking, illegal immigration, piracy, oil bunkering, and poaching of fisheries. For example, large-scale oil theft by disparate groupings of armed militants in the Niger Delta is a significant problem. Observers estimate that Nigeria's oil exports have been reduced by 20 percent due to banditry fostered by lingering societal and political grievances. Theft of oil within the country costs the state untold revenues that could be used to improve services for the population.

Africa is a piracy flashpoint, with incidents occurring in Somali waters, the Gulf of Aden, and the Gulf of Guinea. In the first nine months of 2008 alone, paid ransoms may have exceeded \$30 million. Maritime security will remain a challenge, particularly along the Horn of Africa, Swahili Coast, Mozambique Channel, and, to a lesser extent, in the Gulf of Guinea, where littoral nations continue to lack the ability to patrol and protect their waters.

According to a recent U.S. Department of State (DOS) report, trafficking in persons is a significant and widespread problem throughout Africa. Especially prevalent are trafficking in children (including child military conscription), women for commercial sexual exploitation, and males for forced labor. As of 2008, there was only one African country in compliance with the U.S. Trafficking Victim's Protection Act of 2000.

Illicit trafficking of narcotics poses a significant threat to regional stability. According to the DOS International Narcotics Control Strategy Report 2008, and the UN Office on Drugs and Crime, Western Africa has emerged as a critical trans-shipment point for South American cocaine destined primarily for European markets. The presence of drug trafficking organizations in West Africa as well as local drug use create serious security and health challenges. The strong Euro currency, increased European cocaine demand, and successful interdiction in the Americas contribute to West Africa's place in the narcotics trade. The UN estimates that 27 percent of all cocaine annually consumed in Europe transits West Africa, with trends rising significantly. In addition to the health and medical problems resulting from the distribution and spread of narcotics along the trafficking routes, the presence and influence of traffickers in the West African region has had a profoundly corrosive effect on the rule of law in many West African states. It must be noted that the narcotics trafficking from Southwest Asia through the islands into East and Southern Africa also remains a significant concern. Although there is a degree of political will within many African

states, efforts to combat narcotics trafficking are hampered by resource shortfalls, law enforcement and judicial capacity, and corruption.

Other Nations and Organizations Operating Within the AOR

As Africa's importance is recognized, more non-African countries and international governmental organizations seek to develop, maintain, and expand relations with African states. China, India, Brazil, Turkey, Japan, Russia, European states, the North Atlantic Treaty Organization (NATO) and the European Union (EU) have all focused increasingly on Africa's potential and its strategic significance.

European leaders remain committed to working with their African counterparts on a broad range of developmental issues. Specifically, in the peace and security arena, the EU has mounted several security sector reform operations in Africa, including in the Democratic Republic of the Congo (DRC), Guinea Bissau, Chad, and the Central African Republic. NATO airlifted African Union (AU) peacekeepers into Darfur and Somalia and NATO supports development of AU peacekeeping capability with U.S. and other NATO officers embedded into AU Peace Support Operations Division. Recently, both NATO and the EU initiated Horn of Africa counter-piracy operations and they coordinate their counter-piracy efforts with U.S. Central Command's Combined Task Force-151.

Other European nations without historic ties with Africa, such as Switzerland, Denmark, Finland, Norway, and Sweden, have increased their support for UN operations, and have bilateral assistance efforts that contribute to capacity building. U.S. Africa Command continues to build cooperation with European partners to coordinate programs and contribute to a focused, collaborative approach to capacity building.

Additionally, it is important to note China and India's ongoing efforts in Africa. Over the last ten years, China's interests in Africa have increased significantly. China is the world's leading consumer of copper, steel, cobalt and aluminum, and is second only to the United States as an importer of African oil. India, as of April 2008, pledged to invest \$500 million over the next five years in development projects in Africa, and also pledged to double financial credit to African countries from \$2 billion dollars during the past five years to \$5.4 billion over the next five years. The actions and contributions of both of these nations demonstrate the active role they play in Africa today.

U.S. AFRICA COMMAND STRATEGY

U.S. Africa Command's strategy of sustained security engagement focuses our military-to-military (mil-to-mil) programs on conflict and crisis prevention rather than reaction. The Command, in accordance with U.S. foreign

policy and national security objectives, creates, sustains, and supports opportunities to assist our African partners in their efforts to build enduring security capacity to prevent or mitigate the catastrophic effects and costs associated with instability, conflict, transnational threats, and humanitarian disasters.

Interests, Endstates, and Objectives

The National Defense Strategy objectives of defending the homeland, promoting security, deterring conflict, and winning our nation's wars define U.S. security interests in Africa. U.S. Africa Command, in developing its command strategy, identified the following as our theater strategic interests:

- Prevent attacks against Americans by transnational threats emanating from Africa;
- Prevent acquisition, transfer, or transit of weapons of mass destruction (WMD) material or expertise;
- Maintain our freedom of movement into and through the AOR;
- Foster the prevention, mitigation, or containment of conflict;
- Foster sustained stability;
- Mitigate the effects of significant humanitarian crises or natural disasters;
- Deter and contain pandemic influenza in the AOR.

The DOD Guidance for Employment of the Force specifically directs three strategic endstates as guidance for U.S. Africa Command's activities. These are:

- Endstate 1: African countries and organizations are able to provide for their own security and contribute to security on the continent.
- Endstate 2: African governments and regional security establishments have the capability to mitigate the threat from organizations committed to violent extremism.
- Endstate 3: African countries and organizations maintain professional militaries that respond to civilian authorities, respect the rule of law, and abide by international human rights norms.

U.S. Africa Command's primary effort is building African security capacity so our partners can prevent future conflict and address current or emerging security and stability challenges. This approach reinforces African states' gains in improving governance, and enables the United States to help

improve the effectiveness of current African supported UN and AU peacekeeping missions.

The Command-developed theater strategic objectives are designed to: 1) support the achievement of the theater strategic endstates, 2) protect or advance U.S. interests in Africa, and 3) provide focus for the Command's engagement activities. The primary mechanism for meeting the following objectives is building African security capacity.

U.S. Africa Command theater strategic objectives are:

- Defeat the Al-Qaeda terrorist organization and its associated networks;
- Ensure peace operation capacity exists to respond to emerging crises, and continental peace support operations are effectively fulfilling mission requirements.
- Cooperate with identified African states in the creation of an environment inhospitable to the unsanctioned possession and proliferation of WMD capabilities and expertise;
- Improve security sector governance and increased stability through military support to comprehensive, holistic, and enduring USG efforts in designated states;
- Protect populations from deadly contagions.

U.S. Africa Command's strategy of security capacity building will support long-term African stability, while also fostering the development of African forces that can address contemporary and future conflicts. Our strategy allows the Command to provide support to efforts led by other U.S. Government (USG) agencies responsible for development and diplomacy. Most importantly, this strategy allows U.S. Africa Command to defend the Homeland and secure U.S. interests abroad.

Continent Wide Programs, Activities, and Plans

To meet our theater strategic objectives, U.S. Africa Command implements and supports programs that span the whole of Africa, as well as programs specific to regions and countries.

Support to the Fight Against Violent Extremism

Combating violent extremism requires long-term, innovative approaches, and an orchestration of national and international power. By strengthening our partners' security capacity, we will deny terrorists freedom of action and access to resources, while diminishing the conditions that foster violent extremism.

Operation ENDURING FREEDOM-TRANS-SAHARA (OEF-TS) is the DOD contribution to the Trans-Sahara Counterterrorism Partnership (TSCTP). This partnership uses the capabilities of U.S. Government (USG) agencies to counter terrorism in North and West Africa. The OEF-TS component of TSCTP is designed to assist participating African nations as they improve control of their territories and thus deny safe havens to terrorist groups. Cooperation strengthens regional counter terrorism (CT) capabilities and reduces the illegal flow of arms, goods, and people through the region. The military train and equip component of TSCTP is primarily funded with DOS Peacekeeping Operations (PKO) funds. PKO funds for TSCTP are a critical component of the long-term strategy for OEF-TS and TSCTP.

Our partners' enthusiasm and support for these efforts was evident during Exercise FLINTLOCK in November 2008, when nine African and four European partners came together to conduct a CT exercise spanning an area larger than the continental United States. The principal purpose of the FLINTLOCK exercises is to improve military interoperability, and strengthen regional relationships.

COMBINED JOINT TASK FORCE - HORN OF AFRICA (CJTF-HOA) is the second named operation ongoing in Africa. Discussed in greater detail in the Component and Subordinate Command Section, CJTF-HOA employs an indirect approach to counter extremism. Through a strategy of Cooperative Conflict Prevention, the task force builds security capacity, promotes regional cooperation, and protects coalition interests.

OPERATION OBJECTIVE VOICE (OOV), known previously as *OPERATION ASSURED VOICE - AFRICA (OAV-A)*, is an operation that strikes at the heart of violent extremist efforts--ideology. OOV is a proactive effort where multiple agencies partner with African governments to broadcast messages to counter extremist propaganda. Military Information Support Teams, in conjunction with DOS public diplomacy, have demonstrated success in several countries including Nigeria, Mali, and Kenya. We continue to work with participating nations, Embassy Country Teams, and DOS to enhance this program.

Security Assistance

Theater Security Cooperation (TSC) programs remain the cornerstone of our persistent, sustained engagement. These programs build lasting relationships, promote common interests, and enhance partner capabilities to provide safe and secure environments. Our mil-to-mil programs assist our allies and partners in maturing their capabilities to conduct operations with well-trained, disciplined forces that respect human rights and the rule of

law. Our cooperative security efforts provide essential peacetime and contingency access and infrastructure, improve information sharing, and are vital to U.S. Africa Command's support of U.S. foreign policy and national security objectives.

International Military Education and Training (IMET) programs provide education and training to foreign military and civilian personnel. IMET is a critical form of security cooperation in theater. A robust IMET program is a long-term investment in the future and directly supports U.S. interests.

The target audience of IMET is future military and civilian leaders. IMET provides education and training for both military and civilian personnel to help militaries understand their role in a democracy. IMET exposes countries to our democratic principles, but achieving long-term results is impeded if these programs are not sustained over a long period. If we are perceived as unreliable, African states may pursue training with countries that do not share our values, including our commitment to respect for human rights, good governance, and transparency, and this could impact our relationship with a state's security forces--a relationship that might not recover for a generation. The long-term benefit of IMET cannot be overstated. Forty-six of fifty-two African states and one organization (Economic Community of West African States (ECOWAS)) are expected to have IMET programs in Fiscal Year (FY) 2009.

Foreign Military Financing (FMF) provides critical U.S. military equipment and services to partner countries. U.S. Africa Command seeks to align FMF programs to enhance security capacity building by including FMF as part of our long-term strategy to procure compatible systems that increase interoperability, effectiveness, and efficiency of training. FY 2008 FMF numbers were approximately \$18.7 million for 53 countries, with most of this going Tunisia and Morocco. If we are to achieve our endstates and avoid undesirable strategic consequences, we must continue to closely monitor our strategic use of FMF and cooperatively work together to ensure its distribution contributes directly to our long-term goals.

IMET and FMF are critical to accomplishing the United State's mission in Africa and constitute long-term investments in critical relationships. Both programs are fundamental to our strategy of preventative rather than reactive response.

Foreign Military Sales (FMS). Goods bought through FMS have improved interoperability with countries that benefit from the program. Vehicles, watercraft, aircraft, and equipment purchased through the program are often the same materials currently being used by U.S. forces. Countries that are eligible to receive FMS are eligible to receive Excess Defense Articles (EDA) as well. Trucks supplied to the Senegalese military through the EDA program

will be instrumental during the deployment of Senegalese Battalions in support of their peacekeeping operations in Darfur.

Continental peace support operations and military-to-military programs

The Global Peace Operations Initiative (GPOI) is a U.S. State Department-led initiative to enhance global capabilities to conduct peace support operations, with a particular emphasis on building African capacity. This program is expected to train 75,000 peacekeeping troops worldwide by 2010, develop a transportation and logistics architecture to facilitate peacekeeping deployments, and establish an international training center for the training of formed police unit trainers. In Africa, GPOI funds are primarily used to support and expand the pre-existing Africa Contingency Operations Training and Assistance (ACOTA) program. Since FY2005, ACOTA has directly trained more than 68,000 African soldiers, including approximately 3,500 military trainers. U.S. Africa Command supports the ACOTA program by providing military mentor teams. The U.S. military has provided approximately 350 mentors over the life of the ACOTA program, and we are actively seeking ways to provide additional support.

In 2009, the GPOI program is expected to support and expand our communication initiatives on the continent. In West Africa, specifically, GPOI will expand the ECOWAS Regional Information Exchange System (ERIES) satellite network enabling its 15 partner countries to communicate and exchange information.

GPOI programs such as ACOTA and ERIES are critical to our efforts to develop and improve our African partners' security capacity.

The Mil-to-Mil Contact program is a pillar of U.S. Africa Command's security cooperation activities in African countries. Since 2003, over 400 mil-to-mil events have helped host nations address such fundamental topics as integration of women in the military, civilian control of the military, establishment of military legal codes, and programs to develop professional officer, noncommissioned officer (NCO), and chaplain corps. Funding for mil-to-mil operations uses Traditional Combatant Commander Activities (TCA) funds. In FY 2008, \$3.3 million of TCA monies were spent on Africa mil-to-mil activities. We plan to expand this critical program, with \$6.1 million in TCA budgeted for FY 2009.

The National Guard State Partnership Program (SPP) remains a superb, effective TSC program. Linking U.S. states and territories with African countries, the SPP helps build long-term relationships, promotes access, enhances African military professionalism and capabilities, interoperability, and promotes healthy civil-military relations. U.S. Africa Command currently has seven state partnerships: Tunisia-Wyoming; Morocco-Utah; Ghana-North

Dakota; South Africa-New York; Nigeria-California; Senegal-Vermont, and Botswana-North Carolina. The unique civil-military nature of the National Guard enables it to interact consistently, over time, with all security forces, and, when appropriate, African civilian officials. We are seeking support from Adjutant Generals to expand this valuable program.

Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) Programs and Humanitarian Assistance (HA)

U.S. Africa Command's Partner Military HIV/AIDS Program is a successful program focused on a source of suffering and a hindrance to sustained development and stability in Africa--the HIV/AIDS pandemic. HIV/AIDS is a military force generation and sustainment problem for African forces and is a risk to African security and stability. The Command addresses HIV/AIDS in the military context through technical program assistance and implementation from the Department of Defense Executive Agent (DOD HIV/AIDS Prevention Program Office) and the Office of the U.S. Global AIDS Coordinator using three funding sources: the DOD HIV/AIDS Prevention Program Office using a congressional supplemental provided via the Office of the Secretary of Defense Health Affairs Defense Health Program; the DOS Office of the U.S. Global AIDS Coordinator using the U.S. President's Emergency Plan for AIDS Relief (PEPFAR); and the DOS, using the HIV/AIDS Military Health Affairs FMF program. The Command's Partner Military HIV/AIDS Program implemented and executed by the DOD HIV/AIDS Prevention Program Office in collaboration with PEPFAR, provides strategic direction and oversight for designated countries to further U.S. Africa Command strategic objectives.

DOD activities supporting African Military's fight against HIV/AIDS have been very successful and now reach 39 countries in Africa. When DOD's program began in 2001, few African militaries had yet tested their forces for HIV infection, and only a small number had programs or policies addressing HIV/AIDS. Today, as a result of past joint efforts between DHAPP, PEPFAR and U.S. Africa Command, many militaries in Africa now test their forces for HIV and have active programs for HIV/AIDS prevention, care, and treatment. In the past year, U.S. Africa Command's programs have reached 497,000 African troops and family members with prevention messages, and provided testing and counseling and testing services for 102,000 service members and their families. In addition, 800 senior military leaders have been trained on HIV/AIDS policies in their countries, and 7,000 peer educators and 5,000 health care workers received training. About 19,000 individuals are on antiretroviral treatment as a result of these collaborative efforts. These programs and voluntary counseling and testing are helping to affect behavioral change by reducing the stigma often associated with HIV/AIDS in Africa.

Humanitarian Assistance Programs. Interagency coordination multiplies the effectiveness of Humanitarian Assistance (HA) programs. U.S. Africa Command coordinates its humanitarian efforts with those of the U.S. Agency for International Development (USAID) and DOS to ensure its HA efforts on the continent complement and support USAID's lead on development initiatives in a country. U.S. Africa Command Humanitarian and Civic Assistance (HCA) events are undertaken when they support the security and foreign policy interests of the United States, the security interests of the country in which the activity is performed, and promote the specific operational readiness skills of the U.S. forces that participate. Humanitarian Assistance-Other (HA-O) programs are another means for the Command to complete projects that benefit the civilian population of a host nation and support overall development priorities. The command's FY 2008 projects included providing veterinary and medical care, building and furnishing schools and clinics, digging wells, providing clean water in rural and austere locations, and help in delivering disaster relief. Such activities have proven successful in the Horn of Africa.

A variety of innovative HA activities support our long-term interests by building partnerships with African nations and establishing good working relations with international and non-governmental organization (NGO) partners. In Tunisia for instance, the HA program funded architectural and engineering services and partial construction of a new educational facility for marginalized autistic children, while French partners supported construction and training by an international NGO for special educators. In Burkina Faso, from August to October 2008, both the Humanitarian Civic Assistance (HCA) and Excess Property Programs were used in combination to conduct a three-phased Medical Civic Action Program (MEDCAP) to combat eye disease. The Burkina Faso Ministry of Health and Ministry of Defense, with support of the U.S. Embassy, and the Burkina Faso Ministry of Defense, worked jointly to achieve this mission. In another program, fully adjustable, self-prescribing glasses--fine tuned by U.S. military personnel--have been distributed during U.S. military medical outreach projects. In Botswana, HA funds doubled the size of a facility used by an international NGO to provide after-school services for orphaned children. All of these activities contribute significantly to well-being while complementing development efforts that serve the interests of our nation and U.S. Africa Command.

Over the next year, U.S. Africa Command will work closely with Country Teams to ensure HA resources are used to complement other USG funding and achieve overall USG foreign policy objectives while continuing to further American and African security objectives. HA resources are a flexible tool to

complement larger humanitarian and development programs implemented by USAID, PEPFAR, and Millennium Challenge Corporation.

Pandemic Response Programs

In light of the important role national militaries are likely to play in pandemic response globally, Congress provided FY 2008 funds to enable USAID and the U.S. Africa and Pacific Commands to partner to develop host nation militaries' pandemic response capacity. Our Pandemic Response Program will help develop and exercise African military pandemic response plans that complement civilian activities during a pandemic. Our assessment teams are beginning to work in East and West Africa to develop national and regional activities that focus the military role on maintaining security and communications, providing logistic support for provision of food, medicine, and other commodities, as well as providing augmented medical care. This program will build local capacity to respond to other disasters as well.

Interagency Cooperation and Partnership

U.S. Africa Command's interagency efforts are of critical importance to the Command's success. The Command has three senior Foreign Service Officers in key positions as well as numerous personnel from other USG agencies serving in leadership, management, and staff positions throughout our headquarters. From piracy off the coast of Somalia to supporting the UN Africa Union Mission in Darfur, embedded interagency personnel are involved in the earliest stages of U.S. Africa Command's planning. These invaluable experts help the Command ensure its plans and activities complement those of other USG agencies.

The Command's development of its Theater Strategy and supporting campaign plan is another example of its extensive interagency cooperation. Through collaboration among departments and federal agencies, we strive to ensure that our collective activities are integrated and synchronized in pursuit of common goals. In developing the U.S. Africa Command Theater Campaign Plan (TCP), a plan that accounts for peacetime activities over the next five years, the Command has involved interagency experts from the very beginning of the planning process. In the summer of 2008, U.S. Africa Command planners met in Virginia with representatives from 16 agencies in a series of workshops designed to gain interagency input on Africa Command's Theater Strategy and TCP. Representatives from other agencies have also participated in Theater Strategy and TCP discussions and most remain involved in a planning effort designed to complete the TCP by the spring of 2009.

The growth and development of our interagency team depends on the human resources of our partner agencies. USG agencies and departments have been supportive of our requests to fill our interagency billets, and we remain

flexible in defining the role and participation of these agencies as we continue to grow and evolve. Today, all senior executive interagency positions at U.S. Africa Command have been filled, and we continue to work with the interagency to fill additional positions. A total of 27 interagency personnel are assigned to Africa Command from the Department of State, Department of Commerce, Department of Homeland Security, Department of the Treasury, USAID, Federal Bureau of Investigation, and the Open Source Center. The Department of Energy and Department of Justice both have pending assignments. Other agencies, such as U.S. Geological Survey and the Department of Agriculture, have sent representatives to U.S. Africa Command to examine the possibility of placing people at the command permanently.

U.S. Africa Command is aggressively pursuing new, innovative processes and relationships to improve DOD collaboration with other USG agencies in order to maximize the effectiveness of all U.S. activities in Africa.

Regional African Programs, Activities, and Plans

Many of the programs we are currently implementing were transferred from the commands previously responsible for portions of U.S. Africa Command's AOR. As we move forward, we will synchronize this collection of programs across the five regions of Africa so that, together, they enable us to implement the coherent approach outlined in U.S. Africa Command's Theater Strategy. The command's definition of the five regions of Africa mirrors that of the African Union. The regions are: North Africa, West Africa, Central Africa, East Africa, and Southern Africa.

North Africa

While Egypt remains within U.S. Central Command's AOR, we recognize the importance of Egypt's influence throughout the continent. Egypt's partnerships with other African nations contribute to their stability and the professionalization of their militaries, and Egypt has expressed a desire for a close relationship with U.S. Africa Command. As a result, we participated in the U.S.-Egypt defense talks in 2008, and we have concluded a memorandum of understanding (MOU) with U.S. Central Command that ensures synchronization and coordination between commands whenever U.S. Africa Command missions require engagement with Egypt.

Regarding Libya, the lifting of Section 507 sanctions and the recent signing of a MOU on defense contacts and cooperation provide a solid foundation upon which we can build our bilateral military relationship. My staff is diligently preparing a proposal for engagement activities with the Libyans. In February of 2009, we conducted a site visit to determine ways to

assist Libya's Coast Guard, advise them on the procurement of English Language labs in preparation for attendance in our professional schooling, and to conclude a foreign military sales contract enabling Libya's purchase of border patrol vehicles. We approach this new relationship carefully, deliberately, and with the intention to improve military relations consistent with U.S. foreign policy guidance and national security objectives.

U.S. Africa Command will seek opportunities in this region for increased collaboration in the areas of counterterrorism, border, and maritime security. The U.S. SIXTH Fleet, along with several European and North African navies (Malta, Turkey, Greece, Morocco, Algeria, Tunisia, Mauritania, France, Italy, Spain, and Portugal), conducted PHOENIX EXPRESS 2008, a multilateral naval exercise. PHOENIX EXPRESS concentrates on operations that directly contribute to safety and security in the maritime domain, focusing on maritime interdiction, communications, and information sharing. U.S. Africa Command's naval component, U.S. Naval Forces, Africa (NAVAF) will expand PHOENIX EXPRESS 2009 to include navies from Algeria, France, Greece, Italy, Malta, Morocco, Portugal, Spain, Tunisia, Turkey, Senegal, and possibly others.

In June 2008, the Marines that have since become U.S. Marine Corps Forces, Africa (MARFORAF) conducted exercise AFRICAN LION in Morocco. This annual bi-lateral exercise focuses on small-unit infantry tactics, staff training, and humanitarian assistance. In 2009, U.S. Africa Command's Army component, U.S. Army Africa (USARAF), will support the joint exercise, AFRICAN LION, in Morocco.

U.S. Africa Command's air component, Air Forces, Africa (AFAFRICA), is responsible for four exercise related construction projects in Morocco totaling over \$1.2 million. These projects will improve runway capability and construct exercise reception facilities to support current and future Chairman of the Joint Chiefs of Staff exercises in Africa. Additionally, AFAFRICA HCA programs in Morocco have awarded contracts for veterinarian clinic supplies, water wells and school construction.

An excellent model for future USG whole-of-government cooperation can be found in North Africa. In October 2008, one of Africa Command's senior USAID representatives traveled to Morocco to help integrate DOD HA activities into the U.S. Embassy's Country Assistance Strategy (CAS). Working closing with the Embassy team, a MOU between U.S. Africa Command's Office of Security Cooperation (OSC) and USAID's Mission Director was completed. This MOU is designed to align and focus programs and activities to provide for a coordinated, consistent USG response in pursuit of shared policy goals. As strategic partners, U.S. Africa Command and USAID are implementing a program that targets the number-one goal of the U.S.-Embassy's CAS--"Mitigating the factors of youth disaffection and marginalization." This coordinated

interagency approach facilitates a whole-of-government, preventative approach to the problem of disaffected youths, with each agency working closely together, within their mandated areas of responsibility, to achieve a greater effect than had they acted alone.

This project serves as an interagency model for other U.S. Embassies while reemphasizing that, while U.S. Africa Command does not have the lead in the development sphere, it plays an important supporting role to U.S. Mission Strategic Plans.

West Africa

As with much of Africa, West African states are confronted with porous maritime and territorial borders contributing to illegal trafficking in narcotics, persons, and counterfeit goods, illegal fishing and extraction of resources, and other criminal activities. There is also ethnic, religious, and social strife, and a lack of adequate infrastructure to support populations and foster economic development. Often, a crisis in one country affects surrounding countries; likewise, a threat to one country often emanates from or rapidly proliferates to neighboring countries. This requires a multilateral approach to improve security, stability, and development. Despite the success achieved by ECOWAS and the ECOWAS Standby Force, various threats continue to inhibit the sustainment of security and prosperity in West Africa. U.S. Africa Command is working with bilateral partners, ECOWAS, USG agencies, and non-African nations active in the region to address these threats for the mutual benefit of West Africa, the United States, and the international community.

U.S. Africa Command has partnered with several countries in West Africa to develop plans to counter regional threats. In Mali, Niger, Senegal, and Nigeria, the TSCTP and its military element, OEF-TS, are the U.S. lead programs in countering violent extremism in the Sahel. U.S. Africa Command cooperates with the British in their efforts to develop the Republic of Sierra Leone Armed Forces, and, through MARFORAF, also supports the Security Sector Reform program to mentor and develop the new Armed Forces of Liberia.

We have seen significant progress in Liberia during its transition to peace and stability following a 14-year civil war. The Armed Forces of Liberia are completing basic training of their new 2,000 soldier army, but the work here is far from finished. We must continue to provide adequate IMET for officer and non-commissioned officer development, and we must provide additional FMF and Peacekeeping Operations (PKO) funding if we are to sustain the SSR program, mil-to-mil engagements, and develop the Liberian Coast Guard. Additionally, the other security sector elements, police and judiciary, will need significant assistance if they are to successfully replace the departing

UN Police Units and improve their legal system. In recognition of the pending UN withdrawal, Liberia was our number one Security and Stabilization Assistance request for West Africa in FY 2008. DOS requested funds to support the restructuring of the Liberian National Police. Security Sector Reform, supported by IMET and FMF along with persistent and sustained engagement are essential if we are to secure the gains made in establishing peace and security--the essential foundation for national reconstruction and economic development.

In Ghana, the professionalism of its armed forces demonstrated during the December 2008 presidential and parliamentary elections is to be noted. The planning, coordination, and exercises conducted with the Ghana Police and other security forces during the run up to the election were critical to its success. While there were a few instances of election related violence, the security forces quickly and professionally restored order. While domestic security is a police task in Ghana, the military is tasked to provide support when requested, and their recent performance was a positive example of what we intend to support when we work with a partner as they seek to professionalize their military forces. Ghana provides a clear example of an African military force respecting and supporting civil authority.

NAVAF's focus on security cooperation activities in this and the Central Region has been through its key initiative, Africa Partnership Station (APS). In recognition of this important effort, both the Senegalese Minister of Defense and the U.S. Ambassador attended the opening meeting of the APS-hosted Oil Spill Prevention Workshop in Senegal. In Liberia, fifteen U.S. Marines along with five soldiers from USARAF and a U.S. Navy corpsman are working with the new, U.S.-trained Armed Forces of Liberia (AFL). They are training 350 AFL members on basic officer and non-commissioned officer leadership, logistics and vehicle safety, martial arts, and non-lethal weapons and riot control procedures. Other U.S. Marines, along with their Spanish and Portuguese counterparts, are in Ghana providing similar training there. Our African partners see APS as a successful maritime initiative and are eager to participate and improve this valuable program.

Also in the maritime domain, joint Law Enforcement Detachment operations were conducted to enforce maritime law within the Cape Verde waters in 2008. This was done with support of the host nation, our State Department, the French Navy and the U.S. Coast Guard. In 2009, we hope to continue to build these capabilities with other interested countries, such as Senegal.

Additionally, MARFORAF conducted the bilateral exercise SHARED ACCORD in Ghana in June 2008. This annual U.S. and West African exercise focuses on small-unit infantry tactics, staff training, and HA. In July 2008, exercise AFRICA ENDEAVOR 08 in Nigeria improved communications and information systems

interoperability between U.S. and African partner nation militaries. Exercise MEDFLAG 08, a joint medical exercise with the Malian Armed Forces that included HA to the Malian people, was conducted during July in Mali.

Throughout 2008, MARFORAF African Logistics Initiative events provided Senegal, Ghana, and Liberia with an array of logistics training. In May 08, MARFORAF Intelligence conducted the Military Intelligence Basic Officers Course for Africa. MARFORAF also provided military mentors in support of the ACOTA program and expanded mil-to-mil programs in Senegal and Ghana.

One of AFAFRICA's key programs for all of West Africa is the Air Domain Safety and Security program. The Air Domain Safety and Security program is a long-term, steady-state, general purpose Air Force Program of Record. Utilizing general purpose air forces, AFAFRICA is working together with interagency and host nation representatives to enhance the safety and security capacity of civil and military air domains comprising four mutually supporting elements of infrastructure, personnel, situational awareness, and response.

Additionally, AFAFRICA supports an exercise program that included SHARED ACCORD 08 in Ghana and Liberia. One of the highlights of SHARED ACCORD 08 was the treatment of 2,323 pediatric, 961 optometry, 558 dental care and 2,686 adult care patients. AFAFRICA also participated in MEDCAP, DENTCAP, and Civil Affairs outreach projects in Ghana in Feb 2008. Over 758 dental screenings with 361 patients receiving treatments and 666 child preventative dentistry screenings were conducted.

Central Africa

The Central Region is rich in natural resources. However, resource wealth has brought corruption and the misuse of government funds, which in turn can lead to weakened government institutions, and thereby hinder growth and prosperity.

Active rebel movements persist in the DRC, Burundi, Chad, and the Central African Republic. Despite years of efforts for a negotiated settlement in Northern Uganda, the Lord's Resistance Army, operating out of Eastern DRC, threatens the sub-region. Additional areas of concern include movement of transnational terrorist organizations and drugs, as well as the flow of refugees, IDPs, and arms from conflict zones.

The DRC, due to its immense size and strategic location, is a focus of effort because instability there has wider regional implications. An OSC was opened in DRC in the fall of 2008 to manage and coordinate growing theater security cooperation activities. One of our security cooperation focus areas is the Defense Institute of International Legal Studies, which works to develop a viable and transparent military judicial system. We have a great

deal of work ahead of us in DRC, and we are taking steps to address the security issues of this important region.

Regarding other U.S. Africa Command efforts in the Central Region, MARFORAF is expanding mil-to-mil programs in Cameroon. Likewise, AFAFRICA has been instrumental during the initial planning for Exercise AFRICA ENDEAVOR 2009, which will bring together 37 countries and 2 international organizations in Cameroon, Gabon, and Senegal.

In 2008, APS featured the successful deployments of USS FORT MCHENRY and HSV-2 SWIFT with an international staff comprised of representatives from 10 countries (United States, United Kingdom, France, Spain, Portugal, Germany, Equatorial Guinea, Ghana, Gabon and Cameroon) that engaged 14 West and Central Africa countries, conducted 35 port visits, and engaged more than 1700 African maritime professionals in courses custom-tailored to each nation's maritime governance needs. In 2009, the centerpiece of APS engagement is the deployment of USS NASHVILLE. France, United Kingdom, Germany, Portugal, Spain, the Netherlands, Cameroon, Gabon, Senegal, Nigeria and Ghana are providing staff members and training teams, complemented by participation or support from the U.S. Coast Guard, embarked Department of State Political Advisors (POLADS), and other governmental and non-governmental organizations.

MARFORAF also supported the 2008 APS deployment aboard the USS FORT MCHENRY. Throughout the APS deployment, U.S. and Spanish Marines conducted non-commissioned officer leadership training with African military personnel from Liberia, Senegal, Ghana, Nigeria Cameroon, Equatorial Guinea, Gabon, and Sao Tome and Principe.

The Regional Maritime Awareness Capability (RMAC) Project serves as another excellent example of interagency coordination. RMAC provides awareness of maritime threats to the Coast Guard of Sao Tome and Principe. This project has become the catalyst for other assistance, including U.S. Navy Seabee construction of a pier next to the RMAC facility, U.S. Navy mapping of the port, Defense Institute of International Legal Studies assistance in developing maritime laws, and U.S. Treasury Department and Customs assistance in developing laws against money laundering.

East Africa

East Africa includes the Horn of Africa and the Great Lakes region, portions of both the Swahili Coast and Mozambique Channel, and regional island nations. Kenya is returning to stability and economic growth following the aftermath of the post-election turmoil of December 2007. Ethiopia, host of the AU and a key USG CT partner, faces an unresolved border dispute with

Eritrea and continues to conduct counter insurgency campaigns in the Ogaden. Situations in Sudan and Somalia destabilize the entire region. The government of Sudan has been implicated in genocide in Darfur and continues to pose a threat to the Government of Southern Sudan despite the conclusion of the Comprehensive Peace Agreement (CPA) following 20 years of civil war. Somalia, a weakly governed state, provides a haven for extremists and a base for piracy operations. However, we are fortunate amongst the problems of this area, to have a solid and reliable partnership with Djibouti. With accepted presence and mature relationships, Djibouti is invaluable as we conduct our Theater Security Cooperation (TSC) activities with our African partners. A stable friend in a fragile region, Djibouti provides the only enduring U.S. military infrastructure in Africa.

In recent years, incidents of piracy on the high seas off the coast of Somalia have received global attention. In 2008, over 120 attacks occurred off Somalia, which has a long and sparsely populated coast that poses challenges to international counter-piracy operations. Approximately 10 percent of the world's shipping passes through the Gulf of Aden or into and out of the Red Sea. While most of the incidents here have occurred in the eastern Gulf, pirates have struck as far as 450 nautical miles off the Horn of Africa. Crew abductions are common, and ransoms are generally paid within a month of capture. The average ransom has tripled since 2007--as has the number of ships seized.

To address regional instability, the USG, with U.S. Africa Command's support, is leading an international community effort to conduct an effective Security Sector Reform program for Southern Sudan. The goal of U.S. Africa Command's support to the Sudanese People's Liberation Movement/Army (SPLM/A) is to professionalize their army and increase their defensive capabilities. These improvements are intended to help facilitate implementation of the requirements of the 2005 Comprehensive Peace Agreement. Also, our Air Force component continues to provide transport support to peacekeeping forces destined for Darfur.

Despite the security and humanitarian challenges facing East Africa, our military-to-military professionalization efforts, bilaterally and through our support to ACOTA, have enabled Ethiopia, Rwanda, Burundi, Uganda, and soon Tanzania to contribute to peacekeeping missions in Somalia, Sudan, and elsewhere. Also, USARAF will conduct a multilateral, regional, disaster relief exercise with Rwanda, Burundi, Uganda, Kenya, and Tanzania (NATURAL FIRE) in 2009. Increasing the capabilities of our partner nations allows them to address instability and the enabling effects it has on piracy and violent extremism.

Additionally in East Africa, and as part of our overall professionalization efforts, U.S. Africa Command works with partners to promote stability and security through support to professional schools. Five U.S. military instructors currently teach and assist in curriculum development for Ethiopian senior officers at the Ethiopian Defense Command and Staff College. In Kenya, we are supporting Kenyan efforts to develop a professional NCO corps. In Uganda, CJTF-HOA provides twelve instructors for their NCO Academy, as well as guest lecturers at the Command and Staff College in Jinja.

CJTF-HOA conducts security cooperation programs throughout the Horn of Africa, East Africa, and the regional islands. The CJTF focuses its operations on building regional and bilateral security capacity to combat terrorism, deny safe havens and material assistance support to terrorist activity, and prepare for other challenges such as natural and manmade disasters. The effect of CJTF-HOA is maximized by close coordination with our OSCs, coalition members, partner countries, other USG agencies, and NGOs operating in the region.

Mil-to-mil engagement is the foundation of building security capacity in the East African Region. CJTF-HOA mil-to-mil activities includes Staff Officer and NCO mentoring, ACOTA mentors, counter-terrorism training, Peace Support Operations, Maritime Engagement Team activities, disaster response, and Standard Operating Procedures development. CJTF-HOA invests in regional institutions to ensure Africans are on the leading edge of solving their own challenges.

Civil-military activity and development are also pathways to security capacity building for CJTF-HOA. The presence of Civil Affairs (CA) teams in the region help partner nations improve their civil-military relations with local communities. These teams provide CJTF-HOA the ability to access high risk areas, thereby helping advance USG and host nation development priorities. In coordination with USAID and DOS, civil affairs activities help mitigate the stresses that contribute to regional instability.

CJTF-HOA is a model for multinational and interagency collaboration, and its presence in the region is critical to accomplishing U.S. Africa Command's mission.

Southern Africa

With the exception of Zimbabwe, the southern African countries are relatively stable but face significant challenges in improving living standards, reducing government corruption, and developing strong democratic systems. The political and humanitarian crisis in Zimbabwe has had spillover effects on the region, with refugees and disease moving across borders. While

HIV/AIDS afflict the entire continent, Southern Africa has the highest infection rates in the world. Security forces across this region are compromised by the disease, which reduces their ability to conduct operations.

Additionally, with the exception of South Africa, coastal countries here lack the ability to monitor and control their territorial waters. As a result, the region is vulnerable to illicit trafficking and continues to lose important economic resources through illegal fishing.

Despite these regional challenges, South Africa remains the economic powerhouse of Sub-Saharan Africa, producing over 40 percent of the sub-continent's gross domestic product and exporting strategic minerals throughout the world. South Africa's contributions to Africa's stability are not only economic; its professional and capable military provides over 3,000 soldiers to UN and AU missions. U.S. Africa Command is developing a growing and improving relationship with the South African National Defense Force (SANDF). We had a productive pre-planning meeting with SANDF in November of 2008 as we worked together to prepare for the upcoming U.S.-South Africa Defense Committee meetings scheduled for this summer. We look forward to co-chairing the military relations working group with SANDF during these bilateral Defense Committee meetings. In addition, NAVAF completed staff talks in February 2009, and we have a MEDFLAG scheduled by USARAF in Swaziland for this year.

Botswana is also one of Africa's success stories, rising from one of the world's poorest countries at independence to middle income status, and it recently celebrated 40 years of uninterrupted democratic governance. Botswana's military is professional and capable, but remains focused on potential regional instability that may arise from the collapse of the Zimbabwe government. Namibia and Malawi also contribute to UN peacekeeping missions in Africa and states such as Mozambique and Swaziland have also expressed an interest in contributing forces to UN peacekeeping operations.

At the request of the Chief of Staff of the Botswana Defense Force (BDF), Colonel Martha McSally, my Joint Operations Center Chief, has been assisting the BDF for 18 months as they integrated the first female officers into their force. She has led seminars for senior BDF leaders on good order, discipline, and professionalism in a male-female integrated military, and has also conducted seminars in Swaziland and Lesotho.

Advancing the U.S.-South Africa relationship and expanding military cooperation to focus on regional and continental security challenges is extremely important. NAVAF, expanding its maritime safety and security program, deployed the U.S. aircraft carrier USS THEODORE ROOSEVELT to South Africa this past year in an historic visit--the first U.S. carrier visit since the end of apartheid.

U.S Africa Command Component and Subordinate Commands

U.S. Africa Command is comprised of four component commands, one sub-unified command, and the Combined Joint Task Force-Horn of Africa. The service components currently have no assigned forces and rely on forces provided through the Global Force Management and Request for Forces system.

U.S. Army Africa (USARAF)

In January of 2009, U.S. Africa Command gained operational control of U.S Army Southern European Task Force (SETAF), which now, as U.S. Army Africa (USARAF), serves as U.S. Africa Command's Army component. USARAF, in concert with national and international partners, conducts sustained security engagement with African land forces to promote peace, stability, and security in Africa. As directed, USARAF deploys as a contingency headquarters in support of crisis response. USARAF is currently manned at 67 percent of its approved personnel strength for military and civilian positions, with 244 of its 318 military positions and 44 of 110 civilian positions filled. USARAF capabilities center on planning, directing, and providing oversight of security cooperation activities and stability operations.

Recognizing the Army's important contribution to U.S. Africa Command's Theater Strategy, USARAF continues to execute engagement and exercise programs on a bi-lateral, multi-lateral, and regional basis. These programs are designed to help our African partners develop capable security forces that respect the rule of law, abide by human rights norms, are accountable to legitimate civilian authorities, and contribute to internal security and external peace operations.

U.S. Naval Forces, Africa (NAVAF)

NAVAF's primary mission is to improve the maritime safety and security (MSS) capability and capacity of our African partners. Beyond APS, law enforcement operations, and TSC activities mentioned earlier, NAVAF is working to enhance MSS by focusing on the development of maritime domain awareness, trained professionals, maritime infrastructure, and response capabilities.

A critical aspect of MSS is awareness of activities occurring in the maritime environment. Maritime domain awareness (MDA) provides participating states the capability to network maritime detection and identification information with appropriate national defense and law enforcement agencies. A widely accepted first step in achieving MDA is installation of the Automatic Identification System (AIS). AIS is similar to the U.S. Federal Aviation Association system for aircraft identification. Although AIS is used around the globe, the data has not been widely shared to date. In response to NAVAF

initiatives, 18 nations in Africa now share unclassified AIS data through the Maritime Safety and Security Information System (MSSIS).

Partnering with our reserve components, NAVAF is assigning Maritime Assistance Officers (MAOs) to U.S. embassies. MAOs assist country teams in planning for maritime security cooperation activities. They provide insight into maritime culture, attitudes, and capacity--all of which are necessary for understanding where we can best assist each country in building MSS.

U.S. Air Forces, Africa (AFAFRICA)

AFAFRICA is the Air Force component to U.S. Africa Command. Its mission is to command and control air forces to conduct sustained security engagement and operations to promote air safety, security, and development.

AFAFRICA was activated at Ramstein Air Base, Germany on 1 October 2008. AFAFRICA is administratively assigned to the United States Air Forces Europe for organize, train, and equip (Title 10) support. However, AFAFRICA reports directly to U.S. Africa Command for operational taskings and support, and will be organized into an Air Force Forces staff and the 617th Air and Space Operations Center.

AFAFRICA's current command and control center was established on 1 October 2008 to provide a continuous command and control capability for all theater security cooperation exercise and engagement activities as well as on-going crisis response contingencies such as foreign HA, non-combatant evacuation operations, and humanitarian relief operations. Ultimately, this capability will evolve into a tailored air operation center, the 617th Air and Space Operations Center. Scheduled to reach full capability in October 2009, the 617th will be the lead command and control organization for air and space operations and will provide a common operating picture of all air missions within the AOR.

AFAFRICA's total force partnership coupled with an increased reliance on technologies and reach-back assets from Headquarters Air Force and lead major commands will ensure AFAFRICA is prepared for the challenges ahead.

U.S. Marine Corps Forces, Africa (MARFORAF)

U.S. Marine Corps Forces, Africa (MARFORAF) was established on 1 October 2008. MARFORAF is currently co-located with U.S. Marine Corps Forces, Europe (MARFOREUR), in Stuttgart, Germany. One dual-hatted Marine Corps general officer commands both organizations. The two Marine staffs, in addition to sharing facilities, also share common administrative support elements.

MARFORAF has assumed duties for the conduct of operations, exercises, training, and security cooperation activities in the U.S. Africa Command AOR. The preponderance of the Marine Corps' recent activity has been in West Africa

and the Gulf of Guinea. With the establishment of U.S. Africa Command, MARFORAF is planning to expand its activities into other regions of Africa and execute more than sixty engagement events in FY 2009.

U.S. Special Operations Command, Africa (SOCAFRICA)

On 1 October 2008, SOCAFRICA was established as U.S. Africa Command's Theater Special Operations Command--a functional, sub-unified special operations command for Africa. SOCAFRICA contributes to U.S. Africa Command's mission through the application of the full spectrum of special operations forces capabilities including civil affairs, information operations, TSC, crisis response, and campaign planning.

In FY 2009, SOCAFRICA plans to conduct 44 engagement events with 13 countries in Africa. In addition to Joint Combined Exchange Training and bilateral training, SOCAFRICA will supplement its efforts by bringing senior officers and civil authorities from partner nations together to attend seminars and courses to promote exchanges about military aspects of good governance. In FY 2009, SOCAFRICA's information operations and civil affairs activities will focus on eroding popular support for violent extremist organizations--particularly in countries located within the Horn of Africa, Trans-Sahara, and Central Region.

Combined Joint Task Force - Horn of Africa (CJTF-HOA)

Since conception in 2002, CJTF-HOA's mission has migrated to building security capacity through cooperative conflict prevention. During this time, the country of Djibouti has become increasingly important in terms of significance to the U.S. military due to its strategic location. Our enduring presence at Djibouti helps build relationships which are the strongest mechanism for furthering U.S. objectives on the continent.

Responding to the expressed desires of African states, CJTF-HOA focuses its efforts with regional militaries on building state and regional security capacity. Regional security cooperation is fostered through coalition efforts with member countries of the East African Standby Force (We do not provide direct support to the East African Standby Force(EASF); we have bilateral relationships with EASF participating member countries), International Peace Support Training Center, and the International Mine Action Training Center--along with Liaison Officer support for ACOTA training. CJTF-HOA seeks to improve East Africa Maritime Security and Safety through the expansion of maritime domain awareness and implementation of an African Partnership Station East. Working with Partner Countries to develop a professional officer and NCO corps is a foundational element of CJTF-HOA capacity building.

Professional Military Education development through engagements at Command and Staff Colleges and various Senior Leader Engagements support professionalization of militaries, and assist other USG agencies in helping partner states diminish the underlying conditions that extremists seek to exploit.

All of these efforts and activities provide collaborative opportunities for CJTF-HOA to better understand cultural dynamics and tailor programming and projects that support partner militaries while enhancing long-term security capacity building.

THEATER INVESTMENT NEEDS

Theater Infrastructure and Posture Requirements

U.S. Africa Command infrastructure and posture requirements are in two major areas: headquarters establishment, and theater operational support. The command's posture plan and facilities master plan are built around these two requirements.

Infrastructure: Headquarters establishment. For the foreseeable future, our headquarters will remain at Stuttgart. For the next five years, operational factors will be paramount, and we will benefit from the stability of staying in one location where we can polish our operational processes, cement relationships with our partners on and off the continent, and consolidate our gains.

Posture: Theater operational support. U.S. Africa Command seeks to posture itself via its Theater Posture Plan in a manner that enhances its peacetime mission, ensures access throughout the AOR, and facilitates the conduct of contingency or crisis response operations. The command's posture will support U.S. Africa Command's efforts to integrate and synchronize its theater engagement activities with the rest of the USG and key international partners.

Forward Operating Site (FOS) and Cooperative Security Locations (CSL) in U.S. Africa Command's AOR. The command's two FOSs are Ascension Island (United Kingdom) and Camp Lemonier (Djibouti). Ascension Island, a major logistic node for the United Kingdom, is a newly identified node for U.S. Transportation Command in support of Africa Command.

Camp Lemonier is the enduring primary support location for East Africa, and is an identified FOS. As U.S. Africa Command matures, Camp Lemonier remains essential to supporting long-term TSC efforts and establishing strong and enduring regional relationships. Camp Lemonier and CJTF-HOA operations have largely been resourced from the Global War on Terror emergency

supplemental appropriations to establish expeditionary infrastructure and achieve operational needs. Current and programmed projects are an integral part of the Camp's installation master plan. These projects are necessary to support sustained security engagement activities and their supporting units. Camp Lemonier is a critical part of supporting and developing regional African capability and capacity.

Also key to operational support is U.S Africa Command's *Adaptive Logistics Network (ALN)* approach to logistics on the continent. Our goal with ALN is to develop a flexible network of logistics capabilities that has ability to respond to logistic demands. The heart of the ALN will be comprehensive, real-time knowledge of available logistic capabilities and capacities across the continent of Africa. ALN will be the key to integrate the distributed network of FOS and CSL.

En-Route Infrastructure outside U.S. Africa Command's AOR. In addition to the facilities mentioned above inside our AOR, U.S. Africa Command has identified the main operating bases in Rota (Spain), Sigonella (Italy), and the CSL Cairo West as important logistic support facilities. Although these sites are located in other geographic combatant command areas of responsibility, they are critical intermediate nodes for logistics coming in and out of our AOR. Transportation Command requires these facilities to support U.S. Africa Command.

Quality of Life (QoL) Programs

Africa Command's QoL investments affirm our commitment to our team members and their families. Their sacrifices deserve our total dedication. The foundation for our success will be derived from the strength of our families. The Command is committed to providing a strong, supportive environment which fosters growth and excellence, while providing the highest quality of resources and services to our Africa Command family.

The Command has created a QoL office to manage and oversee QoL activities both in the headquarters location and on the African continent. This office will continuously assess the theater-wide environment in order to identify emerging and unusually sensitive QoL issues. Additionally, it will serve as an advocate for the well-being of our team members and families on the continent. Providing for our service members and their families living on the continent of Africa and at other European locations remain a high priority for the Command.

In March 2008, we held our first Africa Command Families on the African Continent meeting to address issues facing families living in Africa, followed by a second meeting in February of 2009. This will be an annual forum where we can address emerging issues and develop our QoL Action Plan. This will be

particularly important as we incorporate CJTF-HOA and its mission. We must ensure that the quality of life for service and family members supporting CJTF-HOA meets their needs as U.S. Africa Command continues to develop. Our goal working with Department of Defense Education Activity and the Department of Defense Dependent Schools - Europe (DoDDS-E) is to provide every student with an opportunity for a quality education.

To assist our team members and their families in solving problems resulting from deployment, reunions, and other family changes, U.S. Africa Command is implementing the Military and Family Life Consultant Program to support both the Command headquarters and the African continent. The program has obtained funding for FY 2009 which will provide licensed social workers and psychologists to the embassies, ensuring services are available as needed.

We must ensure that quality of life for our serving members--wherever they are posted--remains a priority and is funded properly.

U.S. Africa Command Interagency Initiatives

We multiply effects and achieve greater results when we work closely with our USG interagency partners. Having interagency personnel imbedded in our Command enhances our planning and coordination, and the MOU signed between U.S. Africa Command and USAID in Morocco is a model we hope to replicate throughout our AOR. Also, the flexibility provided through partner capacity building programs enabled us to react quickly to provide security enhancing activities and support to U.S. Embassy plans and operations.

Building Partner Capacity

Partner capacity building programs have provided important tools for addressing emerging threats. We were able to put these funds to good use in assisting our partners in Africa in FY 2008, and sought greater funding--in one case twice the previous years amount--for FY 2009.

Our previously mentioned contribution to a U.S. Embassy's program for "Mitigating the factors of youth disaffection and marginalization" is a wise use of capacity building funds in an interagency fashion that best meets U.S. strategic, security, and foreign policy objectives. This program will reduce disaffected youths' exposure to extremist ideologies as well as the recruiters often found in prisons and elsewhere.

Likewise, use of partner capacity building funds in Liberia is intended to develop police force capabilities to maintain security and stability following the pending departure of UN police units. Support to USG security sector reform and rule of law activities is particularly important across the continent since personal security and stability provides the foundation for

constructive economic development, and this development serves the interests of all the peoples of Africa.

Support for Regional Programs

Many of the security and stability challenges on the continent are transnational in nature and require regional, rather than national responses. For example, seasonal droughts and floods usually affect multiple countries and require regionally-based responses. Programs such as the USAID's Famine Early Warning System (FEWS) provide valuable data enabling improved preventive and response activities on the part of both civilian agencies and the U.S. military. FEWS and other regional programs, including various conflict early warning initiatives led by other USG agencies, demonstrate the advantages of a holistic approach to the problems of Africa.

Foreign language skill, cultural awareness, and regional proficiency are core competencies for U.S. Africa Command. The many bilateral and multilateral relationships that U.S. Africa Command maintains as we work with our partners depend on the language skills, advanced cultural awareness, and regional expertise of our forces. Effective interaction with regional partner's governments, militaries, and populations demands a robust ability to communicate on a face-to-face level. Growing and enhancing these language and cultural capabilities is vital for U.S. Africa Command.

CONCLUSION

Today United States Africa Command is serving effectively in support of U.S. national security and foreign policy objectives in Africa. As the newest unified command and the DOD's single focal point for activities in this important region, we are implementing the visionary concept of an integrated command, with key interagency personnel included in our organizational structure, to advance collaboration between DOD and other USG agencies to build greater security with our African partners.

Our priority remains the delivery of effective and sustained security cooperation programs designed to build African security capacity. Long-term security and stability in Africa is dependent on our partners' ability to address their own challenges, so that they can take action not only against security threats, but also to conduct regional humanitarian operations.

In this effort, the importance of our interagency partners cannot be overstated. Diplomacy, development, and defense all require time, funding, and people if we are to meet our obligations successfully. Your support to U.S. Africa Command, as well as to our interagency partners, is critical to our collective ability to meet our national objectives.

It is my honor to serve with the uniformed men and women, our DOD civilian employees, as well as our interagency partners who have made U.S. Africa Command a functioning reality in a very short time. Your sustained support will allow their good work to continue in service of our country.

THREE D STRATEGY

Mr. BISHOP. Thank you very much, General.

This is a very, very significant and important command that has been stood up. Certainly, I think it can and will play a very, very vital role in our national security.

The Appropriations Committee noted in a report that accompanied the 2009 Defense Appropriations bill that traditional U.S. military operations are not an appropriate response to many of the challenges that are facing Africa, including poverty, famine, armed conflicts, political corruption, and the spread of HIV/AIDS.

Of course, AFRICOM has responded to this concern by saying that your programs are driven by the Three D strategy—Diplomacy, Development and Defense—which aims to balance the full spectrum of our national security resources to meet the challenges that Africa faces today.

Would you state for the record for us what the Three D strategy is and how it is being used by AFRICOM, and why it is important to incorporate the diplomatic and development efforts in planning operations of the combatant command and, where there is a conflict, who the final arbiter is when DOD, State or USAID disagree about a course of action and who pays for it?

General WARD. Thank you, sir.

First, as you pointed out, we clearly understand that when you look at the Three D—Defense, Diplomacy, Development—those activities work, in my mind's eye, in a very harmonious way. Mr. Bishop, I will tell you that it did not just occur to me in this assignment how critical those linkages are.

Beginning with my time on the continent almost 20 years ago, going through my time in the Balkans as I commanded the stabilization force for NATO, my time in the Middle East and working activities there, what is very apparent to me is that in order to produce stability in an area, security has to take hold so that development and diplomacy—those actions and attitudes of elected representatives who do things in support of their people—occur together.

So the Three D strategy recognizes the importance of a coherent approach to what we do that causes elements of security to be closely supportive of those things that need to go on in the field of development as well as diplomacy, institutions of government, that take care of its people so that they are, in fact, working as effectively as they can work.

Our role in that is not to do development, not to do diplomacy but to assure ourselves, as best we can, that those activities that we perform in the defense arena are as supportive of those other two legs of the triad as possible. Everyone who would be involved in that would, in fact, pay for their part of it. The activities that we do are obviously paid for by our defense budget as a part of our role in accomplishing that Three D strategy.

I think I would say that, when you look at what we do compared to the totality of what is being done on the continent, our portion of that budget is very small. I cannot cite the numbers, but I can cite an example.

If you look at a program, just one, the PEPFAR—the initiative for the prevention of HIV/AIDS—that program is well in excess of \$6 million on the continent. Our total program of activities on the continent are much, much, much less. So we do not have numbers in our defense activities that in any way compare to what is going on in those other activities—development and diplomacy. In our efforts, we work very closely with the Department of State and with USAID so that our activities are, in fact, complementary to what is being done by the other elements of our government.

Most significantly, the Ambassadors and the country teams have a very heavy say in what we do, to the degree—if an Ambassador or a country team recommends against doing some particular military or security activity, we do not do it, because our activities fully support or align with our foreign policy objectives. We look to our Ambassadors. We look to our work that we do in the relationship we have with the Department of State and also inside the U.S. Agency for International Development, to ensure that our work complements theirs and does not contradict theirs.

Mr. BISHOP. I have to agree with you. I think the fiscal year 2009 budget was \$400 million, and USAID spent \$6 billion.

General WARD. I meant billion. Yes, sir.

Mr. BISHOP. This was just on the HIV/AIDS programs.

When there is disagreement, though, who is the arbiter? Do you defer always to the Ambassador?

General WARD. Quite candidly, we get to resolution prior to getting to the conflict, and I will tell you how I try to do this.

As we developed our campaign strategy, our theater plans—and we did this now beginning almost a year ago at the onset of planning right here in Washington, D.C.—we met with the Department of State and with USAID. As we developed our strategy and as we are now developing our campaign plans, those agencies are a part of our planning process so that as we move ahead, we are not coming up with programs and projects that are outside the parameters of what they would see as important activities for us to accomplish in support of the development and diplomacy.

We carry it a step further when it comes to the execution of those plans and programs and in working very closely with the Ambassador and with the country teams. Then ultimately, if we go through all of that process and it comes to the execution on the ground, for timing reasons and for the atmospherics of a particular situation, if the Ambassador says, “I do not think we should be doing that just yet,” then I would say we would not do it.

So who resolves the conflict? Typically, we do not have conflicts, but if something were to occur that would say that doing a particular military activity at this point in time is not wise and that comes from our diplomatic community, I would defer to that recommendation.

Mr. BISHOP. Thank you, General.

Mr. Young.

PIRACY

Mr. YOUNG. Mr. Chairman, thank you very much.

General, a lot of things are going on in Africa that are troublesome to the United States, that are troublesome to the world and

that are troublesome to anyone who is civilized. I am talking about Somalia, and I am talking about the piracy off the coast—the kidnappings, the holdings for ransom, the taking over of ships with oil and arms and things like this. Do you play a role in any of these issues?

General WARD. Thank you, Representative Young.

Yes, sir, we do. The at-sea portion of our counter-piracy effort is conducted by the U.S. Central Command. So we are fully aware of those activities. We are fully involved in what they are doing, the work of that combined task force at sea. That coalition of international forces from various nations will come together to conduct naval patrolling at sea.

When it comes to the suspected pirates who may be apprehended as a result of those counter-piracy actions, we play a role, as those pirates are then brought ashore on the continent. We work with the governments of East Africa for their taking those suspected pirates into custody and in further adjudication of the particular case.

We also are involved in the work that we do—and you talked about East Africa, the nations of East Africa—in helping them to increase their capacity to provide better control over their territorial waters, which, in fact, is a counter-piracy measure as those nations have better control over their sovereign force. We do that.

We know that for Somalia, in particular, the lack of an effective government is clearly the root of why we have these pirate activities to the degree that they occur. Clearly, they could occur anywhere. Piracy is not a new phenomenon in this world, but to the degree that they occur, the lack of an effective government in Somalia is a part of that.

To that degree, we clearly support, again, our stated foreign policy objectives of support to this Transitional Federal Government and what is done there to help them be more effective in governing their territory. Should our policy dictate otherwise, we then would be involved, as so stated, by our foreign policy. So we see the lack of effective governance as one of the root causes of the piracy efforts.

We support those counter-piracy efforts as they go on, as we work with our friends and neighbors, both our fellow agencies, including Central Command, as well as working with the nations in the East of Africa to adjudicate suspected pirates once they have been apprehended.

Mr. YOUNG. General, the Navy, of course, has the primary responsibility in dealing with the pirates. But in the Somalia area, are you called on to provide any direct or indirect military support of any of the activities in or around Somalia?

General WARD. My command is not, sir.

Mr. YOUNG. Say that again, please.

General WARD. My command is not.

Mr. YOUNG. It is not.

General WARD. It is not.

Mr. YOUNG. As for your military presence, actually as far as personnel under your control, you have a very small command, actually, don't you?

General WARD. A very small command. We do not have a military presence in Somalia, my command.

IMPROVEMENTS TO HEADQUARTERS

Mr. YOUNG. Well, you have a military presence in Stuttgart, Germany. Several of our staff members paid a visit to your headquarters last year, and what they found was a headquarters that was relatively inefficient, with wires strewn across the floor, trying to keep all of the electronics together.

Do we have anything in a budget request to improve or to make more effective your headquarters in Stuttgart?

General WARD. I think we do. That is a work in progress, Mr. Young, what was seen a bit ago. Every day, improvements are made. I count it as a victory when I can pick up the phone or can send an e-mail and it goes to the same address. And we are getting more and more of that in that way.

I think as to the renovations to our IT infrastructure and to our force protection requirements, we have seen steady progress now over the year and a half that we have begun to renovate our facilities. We have a bit more to go, and some of that additional work is, in fact, in the budget submission that we have sent forward.

Mr. YOUNG. I am aware that there is no real consideration of moving your headquarters to Africa, but is there any consideration of moving it to another location other than Stuttgart?

General WARD. Not at this time, sir. I would say that the work that we are doing there in Stuttgart is work that—because Stuttgart is one of our enduring communities overseas, that work—regardless of my command being there for another 3, 5 or 10 years, whatever the case may be, I have—or permanently, I just do not know—there is no consideration. But regardless, those enhancements to that infrastructure would be used by whatever U.S. Government activity that would fall in on it, because it is one of our overseas enduring locations.

Mr. YOUNG. Okay. General, thanks for what you do. We appreciate the importance of what it is that you do and what your command does, and thank you very much for being here today.

Thank you, Mr. Chairman.

General WARD. Thank you, sir.

Mr. BISHOP. Ms. Kilpatrick.

LOCATION OF AFRICOM HEADQUARTERS

Ms. KILPATRICK. Thank you very much, Mr. Chairman.

General, good morning.

General WARD. Good morning, ma'am.

Ms. KILPATRICK. I am most proud of you.

General WARD. Thank you.

Ms. KILPATRICK. I have watched this since the announcement last February 2007 when the former administration announced a new command. I know that you were fully operational in October of 2008, just recently, a year and a half, as you say, just under a year and a half. I have watched your career. I am most proud of what you have done for our country as well as for your new command assignment.

I was going to ask the Germany question on Stuttgart, and you have explained it. It has been one of our best partners over the years, probably since World War II and beyond. Yet I did not understand why we were not moving it, and I understand it takes time to get up. You have said 3, 5, 10 years from now.

Do you foresee our having the command on the continent ever? Is it necessary?

General WARD. Thank you for that, Ms. Kilpatrick.

Two things. There is clearly a potential that the headquarters could be somewhere located on the continent of Africa—or some portion of the headquarters. In today's environment, it is not essential. It is not something that is important for now and what we are doing. From my perspective, our work that we do is the important thing. Our program is the important thing. Our staff headquarters with the planning that it does, quite frankly, could be done from anywhere, that planning function.

Right now, Africans see us as partners and allies, not as part of their problem. So, for many reasons, being on the continent today is not something that is either necessary or has been sought after, because it is not the central part of doing what we need to do to bring value added to our program on the continent.

Our presence on the continent, as leaders of Africa have told me and as our Ambassadors and country teams have told me, is better realized through our offices of security cooperation—those programs that we implement, the support that we provide; not the headquarters function, the planning function—

MILITARY TO MILITARY (MIL TO MIL)

Ms. KILPATRICK. Okay. Hold it. I appreciate that.

So when I was reading military to military—mil-to-mil, I guess, as you call it—what exactly is that as it relates to my former question? Is it mil-to-mil toward governments of the world? I know throughout this, you have called them “states” and not “countries,” and there must be a reason for that. We call them “countries.” You call them “states.” Is there a reason for that?

General WARD. They are countries. They are nations.

Ms. KILPATRICK. And they have their own hierarchy and whatever. What is the mil-to-mil? What does that really mean in the capacity that our command in Africa serves? What does that mean?

General WARD. It refers to the work that we do with the militaries of the nations of Africa as they attempt to increase their capacity to be more professional, to be able to conduct themselves as legitimate military with integrity.

So it is the work that we do, from training, to providing the sorts of orientation, to how militaries perform in legitimate societies. It is young soldiers, sailors, airmen, Marines, and sometimes civilians who are working with the militaries of these nations to increase their capacity to be more effective in providing security for themselves. It is helping them understand proper techniques for boarding if they see something in their territorial waters that ought not be there.

How do you board a vessel that has not been transmitting its intent to ensure that your personnel are as safe as they can be as well as protecting those with whom you are about to interact? It

is our program called the Africa Deployment Assistance Phase Training, where nations of Africa in their quest to provide for their own security have said, we will volunteer and we will support peacekeeping efforts in places like Darfur, Somalia, but we need some help to get there.

So it is training assistance that we provide when they pack an airplane or they load a train to conduct a rail movement. It is the training to determine how you properly secure cargo, how you properly pack the back of an airplane so that what is being loaded is loaded in a way that does not cause some unintended explosion, because you do not pack flammables with foodstuffs or ammunition or things like that.

It is that sort of military professionalization enhancement activities that this military-to military work that we do is about. That is the focus of the military exercises—interoperability—so they can work better as neighbors.

Ms. KILPATRICK. And bring the confidence and the exactness they need as well.

General WARD. Yes, ma'am.

Ms. KILPATRICK. Finally, when we started out—I think the Chairman alluded to that—we did not have any communities that would want that cooperation.

Have we moved in our diplomatic relationships with them to have a better understanding and relationship whereby that might now be possible?

General WARD. That is a great question, ma'am.

Ironically, even at the outset when we had this debate about whether or not they wanted the command on the continent, they had never said they did not want that level of cooperation. That level of cooperation has always been desired, and that was the point about it because they never said, "We do not want to cooperate with America." They have never said that.

As for the programs that were in existence prior to the creation of the United States Africa Command, being conducted as Mr. Bishop indicated, heretofore through three different commands, our message was we will not see any degradation of those programs because that was a fear that they had had. So that is why the focus on adding value to the programs was my focus as opposed to a focus about where we might station our headquarters that created the misperceptions about what our intentions were. So therefore that whole argument was not helpful to promoting our national security interests or in supporting the interests of the Africans in increasing their capacity to provide for their own security.

Ms. KILPATRICK. I like that. I think that is exactly the way to proceed. Thank you, General, for your service.

Thank you, Mr. Chairman.

Mr. BISHOP. Mr. Frelinghuysen.

NO-FLY ZONES

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

General, thank you for your service.

Appreciation of your discussion with my colleague as to the issues of expectation with a new administration and not pointing fingers at the last administration, there is an expectation that we will be con-

centrating more of our efforts, not only through military but a lot on the people behind you, in looking at the needs of the African Continent and in understanding that there are many sovereign nations and that there are also expectations on the African Continent that we will be more involved in critical issues. Some of the greatest crimes against humanity have occurred in Africa. Periodically, we hear calls for intervention when humanitarian crises reach the extremes that some of these cases have.

I just wonder, are you prepared in that regard? I mean there has been talk of no-fly zones. This is more than transporting members of the African Union and troops, but are you ready? Do you, perhaps, anticipate that we may be doing more there than we are now?

General WARD. Thank you for that, sir.

Two things. The forces that we use to do our engagement, which is the preponderance of our activities—our theater security cooperation, our military-to-military engagement, our forces that could range from individuals up to small sizes of groups, squads, platoons, ranging 10, 15—

Mr. FRELINGHUYSEN. What I am talking about is we see, obviously, cases of incredible horrors and deprivation, of unbelievable starvation, and people are saying here at home, why aren't we doing something about it? In some ways, you can use AID and you could use the State Department, but in reality, you often need the power and might and mobility of the military to get the job done. I just wondered how you are putting that into your overall calculations as a possibility.

General WARD. What we do, sir, is our development of plans, addressing contingencies, be they disaster assistance relief, humanitarian assistance, but our planning then identifies the resources that would be required to execute that plan. I do not have forces assigned to do those missions. I would be required to submit a request for forces that would then be received by Joint Staff and acted upon by the Secretary of Defense, because it would require the allocation of forces to conduct the military work that would be required to do in order to satisfy a situation that you have described.

WEAPONS OF MASS DESTRUCTION

Mr. FRELINGHUYSEN. Okay. Weapons of mass destruction. There is a feeling that some of those who have been operating in the Middle East will find fertile ground in certain countries. Have you found evidence of that? I know you work pretty closely with the Intel Community and a variety of others—the DEA, the Drug Enforcement Agency.

What have you found? How are you dealing with it since many countries do not have the ability, quite honestly, to stop that type of trafficking or to stop the development of this type of an activity, or who do not have the military or, perhaps, the political will to do anything about it?

General WARD. Well, first, I would say here that I have no direct knowledge or evidence of that occurring.

Mr. FRELINGHUYSEN. Well, one of the reasons the command was set up, though, was for the possible proliferation or advancement

of weapons of mass destruction finding their way to the African Continent in those countries that might be somewhat conducive to that type of activity. Correct me if I am wrong.

General WARD. No. No. That is clearly a part of our mission set. The work that we do in working with the host nations and their security structure and apparatus are specifically designed to address their capacity to, in fact, deal with that should it arise.

As I was saying, I see no evidence of that at the current time, but our ongoing effort and our persistent engagement is, in fact, designed to help them increase their capacity to prevent that from occurring.

Mr. FRELINGHUYSEN. So, just for the record, you see no evidence of that type of activity?

General WARD. Correct.

Mr. FRELINGHUYSEN. All right.

Thank you very much, Mr. Chairman.

Mr. BISHOP. Mr. Visclosky.

General WARD. But, sir, if I may, the threat is clearly there and the potential is there. So therefore the work that we do with these nations is to address that threat and to hopefully prevent it from occurring.

Mr. BISHOP. Mr. Moran.

SUDAN

Mr. MORAN. Thank you very much, Mr. Chairman.

General Ward, thanks for testifying. More importantly, thank you for your service on one of the few continents that, despite conditions, seems to look up to the United States for leadership.

The budget for AFRICOM took a big hit last year in this committee, largely I think because there was insufficient coordination, explanation, et cetera of what you were planning. So the committee wiped out most of the budget from \$300-plus million down to about \$80 million that was restored in conference with just a \$40 million cut, as I recall. But I think this is something that we need to get a better understanding of as to what you are doing. Frankly, if we are going to adopt the so-called "smart power" premise that it is more effective, then this is the kind of activity that we need to invest in.

I know China is doing it particularly in Africa but also in South America and on any number of continents, and they are making progress in establishing relationships. We had a very substantial study done by the Congressional Research Service (CRS). If anybody is interested in it, we can share it, but this is a clear strategy with a substantial investment on China's part.

One of the problematic things about China's involvement is that it is amoral. I am not saying immoral. They just have no moral compass with which they make these decisions, and that becomes abundantly clear in their relationship with President al-Bashir of Sudan. One of the reasons Khartoum is as prosperous as it is because of China's investment, frankly, so our sanctions would have very little effect.

I was just at a conference on Sudan, and the situation is getting much grimmer because the International Criminal Court has indicted Bashir. He has chosen to take it out on the Darfurian people

by withdrawing all of the aid agencies—the nonprofits, the NGOs. So it will continue the policy of genocide, perhaps in a less direct but equally effective way. It will be a genocide of starvation, of unclean water—unsanitary water—which will spread disease; and of course, it will be the lack of health care.

One outbreak, whether it be meningitis or whatever in those camps, spreads to everybody. We know about the dramatic instances of genocidal activity sanctioned by the Khartoum regime and of the gang rapes of every woman regardless of age, from the very youngest to the oldest.

Something has to be done. We now have a presence on the continent but, really, no intervention in what Bashir has accomplished with regard to the genocide of the Darfurian people. Three hundred thousand have been killed, all told, about 2.5 million in that country. It looks as though, if there is not some intervention, as many as another 1.5 million are vulnerable to the same fate.

I have gone on for a few minutes to give you an opportunity to compose your thoughts.

How do you think we as a Nation should address this outrage against humanity occurring in Sudan?

General WARD. Sir, thank you for that.

Like all of us, I think it is absolutely terrible these crimes—the rapes, the killings—that are committed against any human being, and it is something that we abhor as any person would, the absolutely disdainful and horrible treatment of a human being.

I think from the standpoint of how we approach it, it is something that, as you point out, is the role of the world community in addressing those sorts of things. I think it certainly requires that type of a consensus because, otherwise, the gaps that might exist in whatever may occur could be filled by someone else who would not have the same sentiment. So I think, from that regard, it does imply a consensus approach to solving a very complex and terrible situation.

Obviously, I do not sit in those circles, sir, so as our policy formulations are determined, you are aware there are military aspects to that then. Because of where that country sits, in my area of responsibility, then I will clearly be charged with taking the appropriate action to deal with the military aspects of whatever policy that might be determined.

It is something that the world community, I am sure, is paying attention to. I know we are paying attention to it. As that discussion continues for determining what those activities will be, I think it makes good sense for us to be prepared and to be ready to do whatever part we are asked to do in support of that policy decision.

Mr. MORAN. Could I ask one follow-up?

Mr. BISHOP. The gentleman's time has expired, but go ahead, Mr. Moran.

Mr. MORAN. I thank the indulgence of the Chairman.

That is a perfect answer. It could have been just as well given by any diplomat with the State Department. It is exactly what you are supposed to say.

We have sent somebody over—a nice guy. We have told him to go jaw-bone, which will have zero result. As you know, you are very well-informed and you are experienced. From what I can gather,

you are pretty much a caring person as well, so you must have come up with some ideas in your mind. I mean, if you do not want to share them publicly, I would like to hear them.

For example, if the President were to pull you aside and say, "General, what do you think we should be doing with regard to Darfur?" that is what I would like to hear. Now, you may want to be discreet and tell me afterwards, but that is what I am trying to get your perspective on, because it is tough to just stand by and see it happen with our hands in our pockets.

General WARD. Yes, sir. The thing I would say—and I would be happy to share some of that with you, sir.

The thing that I would say is it is no one thing. It is a combination of things that are required here. The military piece of it would be only a single piece. There are many things that would need to occur, and I think we ought to be approaching it in that very holistic way, sir; because to address it in only a single line, without considering those other lines would only achieve, if at all, very short-term results.

Mr. MORAN. Thank you, sir.

Mr. BISHOP. Mr. Tiahrt.

CHINESE ECONOMIC PRESENCE IN AFRICA

Mr. TIAHRT. Thank you, Mr. Chairman.

Thank you, General Ward, for serving the country. I know you could do a lot of things, but serving the country is what you have chosen, so I appreciate it very much.

Recently, I visited the Command and General Staff College at Fort Leavenworth, and I met a young man who is an officer from one of the countries in Africa. And I cannot remember the country off the top of my head, but I hope that you will find those officers who go through the school and will continue a relationship with them, because many of them become, eventually, their countries' leaders and they could become tremendous allies.

I was reading Time magazine. Its latest issue had 10 trends that they see coming in the future. One of them was the economic expansion in Africa, and they highlighted a lot of involvement by the Chinese in purchasing businesses. I was wondering what your perspective is of the Chinese presence in Africa. Is it military? Is it economic?

We know from this recent spy who defected to America from China that they are conducting a lot of activities in the counter-intelligence area, but that they are also trying to penetrate our economy as well as our defenses.

I wonder, military-wise, is their presence in Africa very large? Is it small? What is your perspective on that?

General WARD. Sir, I thank you.

From what I have determined, the Chinese presence in Africa is largely geared towards economics—access to resources. I do not see a great presence militarily. I do see Chinese military personnel on the continent. A lot of them are involved in infrastructure activities, engineers, doing engineering sorts of work—roads, building buildings, et cetera. I think that is being done in response to their desire for access to resources there on the continent.

The point that you made to begin with, sir, with respect to the officer at Fort Leavenworth as a part of our International Military Education and Training Program, I, too, think that is a very important program. I think it is one of the things that, quite candidly, provides us our best long-term return on investment with respect to militaries and security structures on the continent of Africa that perform with integrity because of the exposure of those men and women who come to our country, who participate in that training and who carry those experiences back to their countries. So I am a firm supporter of that.

The point that you made with respect to keeping in touch with those individuals is an extremely critical one to me as well.

Mr. TIAHRT. One other tool that I think is available to us is, in a lot of Third World countries, if we develop trade with them, with their governments, in the form of defense products, sometimes that is a longtime trade relationship that becomes a political relationship that becomes a good ally. There is some hardware available like that—it is called the AT6B—that may be a good tool to move them. It is a light aircraft. It has great ISR capability. It may be a tool that you want to look into as far as what you use in assistance of that as well, but it certainly could be an open door for a lot of these governments that need to become good allies in the future, and I hope you will take a look at that.

General WARD. Thank you, sir.

Mr. TIAHRT. Thank you, Mr. Chairman.

Mr. BISHOP. Ms. Kaptur.

RELIGIOUS PRACTICES

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

Welcome. It is good to have you before us this morning.

From your vast experience, General Ward, just comment about the changing nature of religious practice across Africa, of the different faith groups—Islam, Christianity and different tribal religious practices. You can comment country-specific or just overall. As you look at the sweep of history, what do you see happening across Africa?

General WARD. Well, I thank you for that, ma'am. I do not know if I would be an expert on that, though. I would offer a few observations.

Clearly, the role of the tribes, of the clans, and the historical and cultural attitudes still are very, very predominant regardless of what the religion may be—Christianity, Islam or other. I think that is still, to this day, very, very instrumental in whatever religious belief that may be being practiced. I think there are clear groupings, and religion remains a priority; it remains a focus. Most nations in Africa pay attention to religion in ways that define their society based on their culture.

One of the things that for our command is very important is this notion of how we understand cultures, how we understand the society, how we understand the people, because of how that influences who they are. And then, quite candidly, how it should be guiding our interactions with them so that we approach it from understanding who they are as a people.

Recently, in South Africa, my command participated in a worldwide chaplain conference, with chaplains from various militaries from around the world, to include from the Continent of Africa. They gathered to discuss the role of religion in military societies—correction—in the military institutions, not so much from the standpoint of directing or guiding, but does it have a role in the values, in the morals, et cetera, et cetera, of a religious military institution.

The fact that the meeting even occurred acknowledged that there is a role to be played, that there is a place for this in military units, again, not promoting one religion or another but in drawing upon those common tenets that might be there from, as I said, treating people with dignity and respect, the value of a human being, values in a more broad sense, professionalism, what that contributes to professional militaries.

So there is an awareness of it. I think there is an ongoing discussion of the role that the militaries could play—correction—that religions could play in the military.

ROLE OF RELIGION IN POLITICAL INSTABILITY

Ms. KAPTUR. If I could interrupt, General, in a nation like Kenya, for example, if one looks at some of the political instabilities there and you tried to peel off the different layers of what might be contributing to that, the role of religion and of a religious affinity, rising fervor among some groups, I think, would be very, very important to understand in the work that AFRICOM may be about here.

I do not think we as a country are very good at understanding that in other nations, and sometimes we try to contain it in very inappropriate ways, and we end up shooting ourselves in the foot.

So I think particularly across northern Africa—and I am not an expert on the nations of Africa—I have noted kind of an inability to accommodate what is really going on in some of these societies.

What you said about tribes is very interesting. You know, there is a tribal loyalty first. What draws people? I have often thought that—for example, from our country, many of the organizations that I am aware of from our State of Ohio who are working in Africa are doing much better work—many of them have religious underpinnings of some sort—than the Government of the United States in building lasting friendships and in really helping people, particularly those who are desperate.

So I will just place that on the table, and I am sure that my time has expired here, but I thank you very much, and I do hope you pay greater attention to that. Thank you.

General WARD. Thank you.

Mr. BISHOP. I thank the gentlelady.

Mr. Frelinghuysen.

Mr. FRELINGHUYSEN. I am all set, Mr. Chairman. Thank you.

Mr. BISHOP. Ms. Kilpatrick.

COMBINED JOINT TASK FORCE—HORN OF AFRICA

Ms. KILPATRICK. Just one thing. Thank you, Mr. Chairman. I usually do not have a second time at this.

The Combined Joint Task Force—Horn of Africa, in Djibouti, they have a special program that deals with counter-extremism and a strategy of, as they call it, cooperative conflict prevention. Talk to us about that. The Horn is a very important part of the continent.

What about that program? Is it helpful in that the Horn may be doing other things?

I understand yours is a military command and that what we need on the continent are all kinds of agencies working together to rectify some of the things that are wrong in that part of the world where over 800 million people live, and similarly around the world, where many other countries are in conflict. We have severe conflict on the continent. That is why I am glad you are there, that we are there in a military capacity, not to mention that all the other things are not needed. We need them, too.

In the Horn specifically and as it relates to the cooperation conflict prevention strategy on it—you may call it something else—what exactly is that?

General WARD. Thank you for that, ma'am.

Two things. First, what we have found is that when we bring together various nations and their military structures together, we bring them together sometimes for the first time to work together, to cooperate, to see a regional issue through a common lens. So, for us, this notion of cooperative conflict prevention describes the fact that, together, they can in fact address a common threat, but to address that common threat requires some degree of collaboration, of cooperation, of working together, of building trust and confidence among themselves, not just in a bilateral way with us.

So this program that exists in the Combined Joint Task Force—Horn of Africa, where we conduct seminars, training exercises, brings in nations who are neighbors but who might not otherwise be exposed to one another. In so doing, something that might arise as an issue does not, because they are talking, they are interacting, they are within the command, they are in Djibouti.

We have a robust liaison program whereby the nations that are a part of the East Africa region, the Horn of Africa, bring their officers into the command, as well as liaison officers, sharing back and forth with their home governments what is being done, again, increasing confidence, increasing trust among themselves, increasing understanding.

In so doing, that cooperative arrangement serves to help prevent something that might otherwise occur in the form of mistaken perceptions and misunderstandings of intent. It reduces the likelihood of that when you come together and you work in a cooperative way. It just takes away some of the potential for some of those conflicts that may have been unintended.

Ms. KILPATRICK. And your command is the lead in bringing that together; is that right?

General WARD. Well, we do it. Others do it as well, but we clearly recognize that it is a very important part of our engagement strategy.

Ms. KILPATRICK. Thank you very much.

Thank you, Mr. Chairman.

AFRICOM STAFFING

Mr. BISHOP. I thank the gentlelady.

Let me ask you, General, in regards to your interagency support for AFRICOM, originally you had sought to fill 25 percent of the staff positions from other than DOD agencies. As of March 1 of this year, it appears that that objective has been abandoned and that only 2 percent of the AFRICOM staff has worked for agencies other than DOD. By the end of March, 29 of the 1,058 filled positions will be occupied by interagency staff, including 5 from USAID, 5 from the Department of State, and others from Commerce, Energy, and Homeland Security.

Why has AFRICOM abandoned the original goal of 25 percent non-DOD staff? What is the preferred mix of DOD versus non-DOD staff? Has it been difficult to recruit staff from the other agencies? How does that shortage of the non-DOD staff affect your ability to execute the Three D strategy?

General WARD. Thank you, Mr. Chairman. Two things.

I wouldn't say we have abandoned it. I don't know if Kip Ward ever had it as a goal. I think that, as the command was going through its formulation, as our transition team was considering how the command might be organized, how it might be formed, what its dynamic might be, this was—and I will be very candid with you—this was just, kind of, thrown on the table as a goal. It may have been rooted more in the ability, some budgetary considerations.

But I will tell you that today, from my perspective, what we are receiving from our interagency partners is very adequate to our work and ensuring that the perspectives of what goes on by our other governmental agencies are represented in our command because of the way we have matrixed our organization, because of the way that we are looking at how we integrate those members from the interagency who are a part of our command into our structure from the highest levels, including, as you know, one of my deputies, through echelon, as we work our various groups and committees.

We are working with the interagency, and it is not just those who are there in a permanent way. There are those who come in on a continuous basis, in a TDY function to come in and work, to understand the role that they could play.

Mr. BISHOP. Do you think that the balance is sufficient? Do you want to increase the non-DOD, or do you think it is good the way it is? Do we need to help in that regard?

General WARD. It is continually evolving, sir. And I think that there are additional spaces that we think would be good to have in the command. But, again, we are learning about that. And, as we learn about it, then we go out and we request that. And, in most instances, the agencies are providing the support that we would seek.

Mr. BISHOP. I raise that question because the concern that was expressed in the report language and by the Committee in the 2009 bill reflects the fact that we are not completely clear on the role that the non-DOD agencies are playing, and that they really don't want DOD to be assuming functions of State and USAID. And, of course, if you don't have the staff to perform the USAID work, it

would appear as if you would have to do it or it doesn't get done. And if it doesn't get done, then that defeats your mission.

That was the reason I was trying to go there. And if there is something that we can do to help, just share that with us.

General WARD. Okay, sir.

Mr. BISHOP. Mr. Frelinghuysen?

SOCIO-CULTURAL ANALYSIS

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman, for another bite at the apple. I would like to, sort of, follow up where Ms. Kaptur was going a few minutes ago.

General, in a speech to the United Kingdom Royal United Services Institute back in September—we monitor you each and every day here—you said, and I quote, “A lot of activity goes on in a continent through our nongovernmental organizations. Academia is involved. I showed you early on this thing about knowledge development. When I was in previous assignments, someone came to me, would talk about, ‘Well, Ward, you need a cultural anthropologist on your team. You need to have someone to help you understand the human dimension. You need to have some human terrain analysis.’”

As you know, we do have such groups. Recently, better advertised, perhaps, in ways that are not so positive. But I hear that the Army's human terrain system or something like it may be headed to Africa, and I understand that actually advertisements have already gone out with help-wanted ads for a new socio-cultural cell within your command. I, quite honestly, think it is a positive development. I think that is great.

Can you tell us what we are doing and why you are doing it? I think we know why you are doing it. Lessons learned from Iraq and Afghanistan. But can you put some flesh on the bones?

General WARD. Yes, sir. I thank you.

That is pretty good there, sir. You go back to that RUSI. And I have not changed—

Mr. FRELINGHUYSEN. Just because you are in Stuttgart doesn't mean you are out of our line of sight here.

General WARD. Exactly, sir.

I have not changed my impression. We need to have a better understanding of those with whom we deal if we are to make a difference that makes sense from their point of view, and unless it does, it won't last. Our intent, sir, is to cause our activities to create the lasting enhancements to a secure environment. And we don't do that if we don't understand our partners.

This business of socio-cultural awareness, human terrain analysis—and I probably shouldn't be using all those buzz words—but it is about how we understand one another. And it is not lost on me nor those of my command that when we sit with our partners and we look at ways of moving ahead, if we don't see things from their point of view, then we will miss the mark.

This endeavor, as we look to build within our Intelligence and Knowledge Development Directorate, not the typical J-coded structures—J1, J2, J3—that you hear in most organizations, but Intelligence and Knowledge Development, as we attempt to build our base of understanding so that when we deal with our partners in

our various partner nations, we can see things from their perspective a little bit better.

It impacts, sometimes, patience. You know, we Americans are very impatient. I mean, we see things, typically, in hours and days. For many of our African partners, it is years and decades. Again, it is a culture—it is an appreciation of the culture.

And so these entities, be they cells or teams, but these entities are designed to help us, as we sit and do our planning, to have a clearer understanding of our partner so that we propose activities, engagements, strategies, it reflects what is meaningful to them, obviously aligned with our objectives and, hopefully, that achieving a desired and permanent result that leads to peace.

Mr. FRELINGHUYSEN. Well, I am glad you are, you know, moving ahead with it. And it doesn't in any way negate the good work of those team members you have behind you, who, in some ways, do some pretty serious intelligence and economic and social investigation and obviously come up with recommendations. But I think having these teams on the ground is indeed reassuring.

And let me just say parenthetically, because we are sort of contractor-centric around here, that it is not always—there are contractors, and there are contractors. And sometimes pulling together these people does necessitate some outside help that might not be innate within a governmental structure. So thank you for what you are doing in that regard.

Thank you, Mr. Chairman.

Mr. BISHOP. Ms. Kaptur.

REMARKS OF MS. KAPTUR

Ms. KAPTUR. Yes, I would just like to offer an opinion—that is the good thing about being elected and having some seniority, you can offer an opinion; no one has to listen to you—but how the United States approaches its presence in places with high levels of what we term “poverty,” “economic poverty.” And I don't think we are very good.

If one looks at Latin America, some would say today there is a growing divide between the nations of Latin America and the United States, despite the investment by our country in billions and billions and billions of dollars in military assistance and organizations such as WHINSEC, formerly School of the Americas.

And as I listen to you, General, talk about connections with the militaries of various nations, my mind goes to the kind of structure that we have funded for a long time relative to Latin America. Something hasn't quite happened there, in that, as you look at elections of leaders in that part of the world, despite our efforts to try to stop it, leaders and their followers turn more and more against the United States.

And I think it is very instructive, as one looks at a new command and this enormous continent of Africa—which I view, tragically, as a continent that has been exploited for centuries, whether it is labor, the export of labor or the internal movement of labor within the African continent today. If one looks at the—if you look at the spread of AIDS in Africa, from South Africa up to Kenya, if you look at the diamond trade and you start understanding a little bit

about that, you go, "Oh, well, here we go then." There is an economic underpinning to the exploitation.

You mention oil bunkering on page 6 of your testimony, and I think about Nigeria and the role of the oil trade and what is happening there. And I mentioned the diamond trade and other resources. There is a lot of extractive exploitation that has gone on by interests outside of the boundaries of the nations of Africa.

And I look at our country, and I think to myself—and we were in Pakistan about a year ago, and we have this command over there, you know, from Egypt all the way to beyond Pakistan. And we think that somehow we are going to manage all of this.

And you talk to the leaders of those countries, and you find their understanding of poverty within their own countries is almost zero—almost zero. And yet, as you embrace Africa, first you embrace poverty and the movement of people away from Africa just seeking a better life because their governments can't function.

And I say to myself, what is a better model? What is a better model for us to embrace societies that are very different than ours that have been historically exploited? And, you know, I don't think we have it.

And I think if you go down the path of WHINSEC, you are not going to succeed. I think you are better off to go back to George Marshall's, spend some time down at the George Marshall house down there at Fort Benning—I think that is in Congressman Bishop's district, if I am not mistaken—and just sit there and read his works. You have probably done a lot of that anyway.

But we are missing the boat. We are missing the boat. We don't seem to be able to transfer democratic practices very efficiently.

We had somebody in here the other day from the Army and Marine Corps, and they were saying that what they are going to do in Afghanistan now is they are going to take our soldiers who come from rural areas and they are going to equip them with machine guns and they are going to teach the people of Afghanistan how to farm. And I sat here and I listened to that, and I thought, "Good luck."

So I think that I would just urge you to be a very harsh judge of what the Department of Defense has done in the past with very good intentions. But if one looks politically at what is happening, the proof is in the pudding that it is not working.

So I thank you very much for listening.

REGIONAL INTEGRATION TEAMS

Mr. BISHOP. I have one other question I wanted to ask General Ward. And I appreciate the gentlelady's remarks.

AFRICOM is one of our combatant commands that is designated "combat command plus." And I think the "plus" is because of the development and diplomacy that is really so much a part of it. And it is really a unique approach. I think only SOUTHCOM has really utilized that approach in the past.

General Ward, I don't know if you have any thoughts about it, but some are thinking that this might be a new model for our military engagements as we try to improve our national security around the world, particularly in places like Africa and the other commands where we are.

Let me just ask you one question about your regional integration teams. In 2008, you cancelled your plans to open five offices to house the small regional integration teams of five or 10 staff people, which would have been dispersed across the continent.

Why did you cancel the plans for those teams? Which nations or regions did you ask or did you approach to host those regional integration teams?

And given the expense and the logistics requirements of moving staff around the continent and how big the continent is, isn't it important to have a presence in those regional locations?

And do you have any plans to try to re-establish, to go forward with the regional integration teams in 2010?

General WARD. Thank you, Chairman.

If I might, Representative Kaptur mentioned about this integration issue. And before I get to the RITs, what I would say is that we recognize that the long-term viability of a nation rests in, as I mentioned, the integration of those three elements: security, development, and diplomacy.

Our part of that triad is the security part. It needs to be happening hand in hand with the work being done in the development arena as well as in the diplomacy arena, with the representative, some effective governance, taking care of its people.

So we fully recognize that those are integrally linked activities, only one of which we are responsible for. The diplomacy, the development falls with other agencies of our government. And that is why my point about, you know, I clearly endorse their capabilities being required as much as ours are needed, because, without that, then we don't get the lasting benefit of a stable environment.

With respect to the regional integration teams, kind of like the notion of how many interagency people do you need. Again, that initial planning team, with that concept, it was a concept, quite candidly, one that, as I thought about it more and more, and as I listened to our on-continent presence, the ambassadors, as well as the nations with whom we were dealing, that is not what they felt was most important.

What they felt was most important was, when it came to executing programs in their countries, having an element in place that could provide a day-to-day assistance to them. That wasn't being provided by these regional integration teams. That is provided by our offices of security cooperation.

So, therefore, my priority is to reinforce, to buttress, to build those teams, because that is what is important in our delivery of programs on the continent. The planning function, the integration of our activity function is done at my headquarters, within the headquarters. This notion of how we look at the various regions of the continent, we are taking care of that.

And, given the infrastructure on the continent, you know, getting around is not facilitated, quite candidly, by being on the continent. Most infrastructure travel to Africa requires movement through Europe, Frankfurt, Paris. And so it is not facilitated by being there, from that coordination point of view, outside of the particular country you are in.

TRAVEL REQUIREMENTS TO/FROM AOR

Mr. BISHOP. Sir, I am glad you touched upon that. That is a good segue onto your transportation challenges. Of course, 11.7 million square miles is a pretty big area to cover. And we appropriated, in 2009, \$30 million for operational airlift support. Of that amount, \$17.5 million was provided to your air component, which is the 17th Air Force, for military airlift support. And \$12.5 million of that was for U.S. Transportation Command, TRANSCOM, for the purposes of contracting for AFRICOM staff travel support.

What are the travel requirements of AFRICOM leadership and senior staff to and from your area of responsibility? And how much of your travel requirement is taken care of by military air, and how much of it is contracted out for commercial services?

General WARD. Right now, sir, my staff travel is required for our coordination, our exercise planning. We conduct various in-process reviews as we prepare to conduct major seminars. That is a pretty robust travel requirement for my staff to move around the continent.

The funds that you described there include also the funds for moving military supplies and equipment, as these exercises are conducted. And so that portion that was provided to my 17th Air Force takes care of transporting our military equipment, personnel in pursuit of exercises, relief activities, logistics sustainment, the—

Mr. BISHOP. You haven't had a lot of that, though, have you?

General WARD. Haven't had a lot of it. We did Flintlock. We did Africa Endeavor. And we certainly look to have that increase, because, again, the point that Ms. Kilpatrick made, our partner countries are asking us for more.

Mr. BISHOP. Okay.

General WARD. And so this would be very helpful in that mobility requirement that we have for moving around the continent.

Mr. BISHOP. So that is the military air portion. With the TRANSCOM portion, are the services that are contracted for your staff use, is it private air service, or is it commercial air service? Or what kind of air services are you using with the TRANSCOM contractor?

General WARD. The TRANSCOM contract is both. We have just received word of a private contractor, hasn't started just yet, it will start at the end of this month, the first of next month, for helping with my staff's travel around the continent. And that will start, I think, the first of April, sir, that TRANSCOM has done that contract for.

Mr. BISHOP. Okay. Finally, with regard to that, do you have any challenges, do you foresee there being challenges in your having to utilize commercial transportation for mobility around Africa?

General WARD. Oh, yes, sir, there are challenges. The challenges are in routing, in scheduling, in frequency of schedules. I had a case of one of my staff, who missed one of the twice-a-week departures and had to spend an additional 4 days because of just the infrequency. I think there is one carrier that is authorized to travel from—African carrier—from Africa back to our continent. So there are challenges in the commercial airline scheduling regime.

Mr. BISHOP. So is that why you need to rely on the private?

General WARD. That is why we need the dedicated travel in order to do our coordination for building the relationships, yes, sir.

Mr. BISHOP. Okay. Thank you, General.

Mr. Rothman, do you—

Mr. ROTHMAN. No, thank you. I am going to be reading the general's testimony. Thank you.

Mr. BISHOP. Thank you.

Ms. Kilpatrick, do you have anything else?

Ms. KILPATRICK. I am fine, sir. Thank you.

Mr. BISHOP. Good.

General Ward, thank you for your testimony today.

The Committee is adjourned until it reconvenes this afternoon at 1:30.

THURSDAY, MARCH 19, 2009.

NAVY AND MARINE CORPS MILITARY PERSONNEL

WITNESSES

**BARNEY BARNUM, ACTING ASSISTANT SECRETARY OF THE NAVY FOR
MANPOWER AND RESERVE AFFAIRS**

**VICE ADMIRAL MARK E. FERGUSON III, U.S. NAVY, CHIEF OF NAVAL
PERSONNEL AND DEPUTY CHIEF OF NAVAL OPERATIONS (MAN-
POWER, PERSONNEL, TRAINING, AND EDUCATION)**

**LIEUTENANT GENERAL RONALD S. COLEMAN, DEPUTY COMMANDANT
FOR MANPOWER AND RESERVE AFFAIRS, UNITED STATES MARINE
CORPS**

INTRODUCTION

Mr. MURTHA. Let me start the hearing, but let me read something here to the Committee.

“Captain Harvey C. ‘Barney’ Barnum, Jr.

“Rank and organization: Captain (then Lt.), U.S. Marine Corps, Company H, 2d Battalion, 9th Marines, 3d Marine Division reinforce. Place and date: Ky Phu in Quang Tin Province, Republic of Vietnam, 18 December 1965.

“Entered service at: Cheshire, Connecticut. Born: 21 July 1940, Cheshire, Connecticut.

“Citation: For conspicuous gallantry and intrepidity at the risk of his life above and beyond the call of duty. When the company was suddenly pinned down by a hail of extremely accurate enemy fire and was quickly separated from the remainder of the battalion by over 500 meters of open and fire-swept ground, and casualties mounted rapidly. Lt. Barnum quickly made a hazardous reconnaissance of the area, seeking targets for his artillery. Finding the rifle company commander mortally wounded and radio operator killed, he, with complete disregard for his safety, gave aid to the dying commander, then removed the radio from the dead operator and strapped it to himself. He immediately assumed command of the rifle company, and moving at once into the midst of the heavy fire, rallying and giving encouragement to all units, reorganized them to replace the loss of key personnel and led their attacks on enemy positions from which deadly fire continued to come. His sound and swift decisions and his obvious calm served to stabilize the badly decimated units and his gallant example as he stood exposed repeatedly to point out targets served as an inspiration to all. Provided with two armed helicopters, he moved fearlessly through enemy fire to control the air attack against the firmly entrenched enemy while skillfully directing one platoon in a successful counter-attack on the key enemy positions. Having thus cleared a small area, he requested and directed the landing of two transport helicopters for the evacuation of the dead and wounded. He then as-

sisted in the mopping up and final seizure of the battalion's objective. His gallant initiative and heroic conduct reflected great credit upon himself and were in keeping with the highest traditions of the Marine Corps and the U.S. Naval Service," for which he received the Medal of Honor.

Welcome.

I was on the board reviewing medals of honor and all medals in Vietnam and the first Marines. Never had one who rose to this level. We are proud of you.

And with that, we ask you for any testimony you may have.

SUMMARY STATEMENT OF MR. BARNUM

Mr. BARNUM. Thank you, Mr. Chairman and other distinguished Members of the Subcommittee. It is an honor for me to be with you today to testify on the Department of the Navy's manpower and personnel. My remarks will be brief so we can get on with the questioning and get into the areas that you want to focus on.

You know, as we sit in this room, this hearing room today in peace and security, we are at war and it is the young men and women of the Navy/Marine Corps team that are on the tip of the spear in Iraq and Afghanistan. Your Navy and Marine Corps have met all personnel requirements of the combatant commanders that are prosecuting the overseas contingency operations and our most precious asset, our Marines and Sailors, have confronted the challenges of this war head on. They are performing marvelously. They make us proud. They are truly the linchpin to our success.

I am accompanied today by Lieutenant General Coleman, the Deputy Commandant for Manpower and Reserve Affairs, and Vice Admiral Ferguson, the Chief of Navy Personnel. Our mission is to provide the right people at the right time and at the right place and at the best value, while ensuring the welfare of our most important asset: Sailors, Marines, civilian personnel and their families; and, together, we look forward to answering your questions as we prepare to assist you in understanding how we support our Sailors, our Marines, our civilian personnel, and our families.

Thank you, sir.

No written statement for Mr. Barnum—Committee requested statement from the Service Chiefs only.

Mr. MURTHA. Mr. Frelinghuysen, do you have any comments?

Mr. FRELINGHUYSEN. Just it is my pleasure to welcome you here today. I apologize for being late. It is an honor to be in your presence, Mr. Barnum, as well as the Admiral and the General. Thank you very much.

Mr. MURTHA. We will ask the Admiral next, although we feel the Navy is part of the Marine Corps.

SUMMARY STATEMENT OF ADMIRAL FERGUSON

Admiral FERGUSON. I appreciate that courtesy.

Chairman Murtha and the distinguished Members of the Committee, thank you for the opportunity to review with you today the Navy's recruiting and retention efforts, as well as our end-strength projections for this fiscal year.

We remain today a global Navy, with over 40 percent of our forces underway or deployed. We have increased our operational availability through the fleet response plan and are engaging in new mission areas in support of the joint force.

We continue to play a key role in support of joint operations in Afghanistan, Iraq, and across the globe by providing approximately 14,000 Sailors as individual augmentees. With this high operational tempo, we remain vigilant concerning stress on our Sailors and their families. We ensure that Sailors have adequate opportunity to rest and spend time at home between deployments and provide them a comprehensive continuum of care.

The tone of the force is positive. Sailors and their families continue to express satisfaction with the morale and leadership at their commands, their health care, their benefits and compensation.

Over the past year, we have been successful in recruiting high-quality Sailors. In 2008, we achieved our enlisted and officer goals across both the Active and Reserve components, while exceeding DOD quality standards in all recruit categories. For the first time in 5 years, we achieved overall Active and Reserve medical officer recruiting goals.

To ensure the long-term health of the force, we are transitioning from a posture of reducing end strength to one we term stabilizing the force. To meet global demands and minimize stress on the force, the Secretary of the Navy used his end strength waiver authority for both 2008 and 2009. We project to finish 2009 within 2 percent above our statutory end strength authorization.

The comprehensive benefits provided by the Congress for our service members, combined with the current economic conditions, have resulted in significantly increased retention and lower attrition across the force. We began this fiscal year with an end strength of approximately 332,000. Despite cutting 3,000 accessions, reducing bonuses and being more selective with whom we allow to reenlist, we expect to end this fiscal year at approximately the same level. Consequently, we project that our current appropriated funding levels for manpower and personnel will be insufficient for this fiscal year.

Our stabilization strategy has been directed at sustaining a high-quality force able to respond to new mission areas within our fiscal authorities. We are guided by the following principles: continue to attract and recruit our Nation's best and brightest; retain the best Sailors; and target those incentives we use to retain only those with the critical skills needed to meet mission sets; balance the force in terms of seniority, experience, and skills; safeguard the careers of our top performers and insure promotion rates; and provide the fleet and the joint force stable and predictable manning.

On behalf of all the men and women in uniform who sacrifice daily and their families, I want to extend my sincere appreciation to the committee and the Congress for your unwavering support for our Navy.

Thank you very much.

[The statement of Admiral Ferguson follows:]

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
HOUSE APPROPRIATIONS COMMITTEE

STATEMENT OF
VICE ADMIRAL MARK E. FERGUSON III, U.S. NAVY
CHIEF OF NAVAL PERSONNEL
AND
DEPUTY CHIEF OF NAVAL OPERATIONS
(MANPOWER, PERSONNEL, TRAINING & EDUCATION)
BEFORE THE
SUBCOMMITTEE ON DEFENSE
OF THE
HOUSE APPROPRIATIONS COMMITTEE
ON
MANPOWER
MARCH 19, 2009

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
HOUSE APPROPRIATIONS COMMITTEE

United States Navy Biography

Vice Admiral Mark E. Ferguson, III
Chief of Naval Personnel,
Deputy Chief of Naval Operations
(Manpower, Personnel, Training & Education)

Vice Admiral Ferguson assumed duties as the Navy's 55th Chief of Naval Personnel on April 16, 2008. Serving concurrently as the Deputy Chief of Naval Operations (Manpower, Personnel, Training & Education), he is responsible for the planning and programming of all manpower, personnel, training and education resources, budgeting for Navy personnel, developing systems to manage total force manpower, personnel training and education resources, and the assignment of all Navy personnel.



Ferguson's previous flag officer assignments include Chief of Legislative Affairs and Assistant Commander for Distribution (Pers-4) at the Navy Personnel Command in Millington, Tenn.

A surface warfare officer, he completed nuclear propulsion training after graduating with distinction from the United States Naval Academy with the Class of 1978.

Afloat, he has served with both the Atlantic and Pacific Fleets. His operational assignments include duty onboard USS *South Carolina* (CGN 37) and USS *Fife* (DD 991). He also served as reactor officer on board USS *Dwight D. Eisenhower* (CVN 69). His command tours include the destroyer USS *Benfold* (DDG 65) and Destroyer Squadron 18.

Ashore, he served at the Bureau of Naval Personnel as the assistant surface captain assignment officer and surface nuclear assignment officer. During 1998-2000, he served as a special assistant to the Supreme Allied Commander, Europe. He completed two other assignments in the Office of Legislative Affairs. From 1992-1994, he served as the officer responsible for providing liaison to the House and Senate Armed Services Committees for all surface warfare, sealift and shipbuilding programs. From 2001-2003, he served as the director of the Senate Liaison Office.

Ferguson holds a master's degree in computer science from the Naval Postgraduate School. He completed a National Security Fellowship at the John F. Kennedy School of Government, Harvard University and is a graduate of the Air Command and Staff College. His awards include the Navy Distinguished Service Medal, the Defense Superior Service Medal, the Legion of Merit and the Defense Meritorious Service Medal.

INTRODUCTION

Chairman Murtha, Representative Young, and distinguished members of the House Appropriations Committee, it is a pleasure to have the opportunity to review the U.S. Navy's recruiting and retention efforts as well as end strength projections for this year.

Navy continues to experience success in recruiting and retention and we expect that success to continue. The tone of the force remains positive. Sailors and their families continue to express satisfaction with the quality of their service, education benefits, health care, and compensation. To continue supporting the Fleet and the joint force, we remain committed to providing the right person with the right skills, at the right time, and at the best value while ensuring the welfare of our Sailors and their families. To meet this commitment, our efforts must enable us to be:

- Competitive for the best talent in the nation
- Diverse
- Responsive to the joint warfighter
- A learning organization
- A leader in human resource solutions.

As we transition from a period of drawdown and begin to stabilize our end strength, we are taking the opportunity to review our policies and undertake initiatives emphasizing performance. Due to increased retention, sustained success in recruiting, and reduced attrition we anticipate ending the fiscal year within two percent above our authorized end strength of 326,323.

Our stabilization efforts are directed at sustaining a high quality force to meet the demands of the Navy's Maritime Strategy and the joint warfighter, while at the same time being able to respond to new mission areas. Our efforts to stabilize the force are guided by the following principles:

- Attract and recruit our Nation's best and brightest
- Retain the best Sailors with the right skills
- Target incentives to retain critical skill ratings
- Balance the force based on seniority, experience, and skills matched to projected requirements
- Focus on performance and safeguard the careers of our top performers
- Provide the Fleet and joint force stable and predictable manning.

RECRUITING

To date, Navy has been successful in attracting and recruiting high-quality Sailors to its officer and enlisted ranks. Building on our accomplishments in Fiscal Year (FY) 2008, we are positioned for continued success through FY09.

Enlisted

Navy met its enlisted active and reserve recruiting goals for 21 straight months through January 2009. This fiscal year, we have met our active and reserve goals each month, and our Delayed Entry Program (DEP) is 89 percent full as of 1 February 2009. We are exceeding quality standards in all recruit categories: 94.4 percent will have high school diplomas—four

percent above the Department of Defense (DoD) standard; and 70.6 percent will meet Test Score Category I-III A standards—10.6 percent above DoD standards.

Active and Reserve Component Accessions and Quality

	FY08			FYTD 09 (as of 1 Feb 2009)		
	ATTAINED	GOAL	%	ATTAINED	GOAL	%
Total Active	38,485	38,419	100.2%	11,266	11,222	100.4%
Total Reserve	9,134	9,122	100.1%	2,633	2,596	101.4%
HSDG*	35,834	90%	94.4%	11,475	90%	94.4%
TSC** I-III A	27,907	60%	73.5%	8,974	60%	73.8%

*HSDG – High School Diploma Graduate **TSC – Test Score Category (Aptitude Level)

We are focusing efforts where recruiting challenges remain. My top enlisted recruiting priorities are:

Nuclear Ratings. During FY08, Navy met its recruiting goals for enlisted nuclear ratings, achieving 100.6 percent of goal. This fiscal year we have met all monthly nuclear rating recruiting goals and are on track to achieve this year's target. Based on current trends, we increased our FY10 nuclear enlisted recruiting goal to offset future shortages. This will enable us to better meet enlisted manning needs as the nation's economy recovers. We continue to rely on the enlistment bonus as the primary incentive to meet our nuclear accession targets.

Special Warfare/Special Operations. We achieved Naval Special Warfare/Special Operations aggregate and individual goals (Explosive Ordnance Disposal, Diver, Special

Operator, Special Boat Crewman) for the first time in FY08. We have continued that success, attaining 100 percent of all four ratings each month this fiscal year. We have established special recruiting programs and an introductory physical conditioning course in our recruit training center to improve our success rate at Basic Underwater Demolition/SEAL (BUDS) training. We are beginning to see positive results from these efforts.

Combat Operations Support. We experienced continued success in FY08 and are on track to achieve our FY09 goals. Combat operations support ratings include intelligence, information warfare, and Seabee ratings, and are vital to providing critical skills in support of joint operations around the world.

Combat Operations Support Accessions

	FY08			FYTD 09 (as of 1 Feb 2009)		
	ATTAINED	GOAL	%	ATTAINED	GOAL	%
Active Accessions	6,565	6,463	101.6%	3,150	3,153	99.9%
Reserve New Contracts	9,134	9,122	100.1%	2,633	2,596	101.4%

Officer

In FY08, Navy attained 104 percent of active component general officer (Officer Candidate School) goal, which included a mission increase of 40 percent over the FY07 target. Reserve component general officer programs also saw significant improvement, finishing FY08 at 105 percent versus 51 percent in FY07. While we achieved overall active and reserve medical

officer recruiting goals for the first time in five years, we did not reach our goals for Dental Corps officers (89 percent). We expect success in FY09 and have increased three of four medical officer recruiting targets to offset existing shortfalls, though we will be challenged to meet our goal for direct commissioned medical officers.

Active and Reserve Officer Accessions

	FY08			FYTD 09 (as of 1 Feb 2009)		
	ATTAINED	GOAL	%	ATTAINED	GOAL	%
Active General Officer*	1,276	1,270	100%	888	1,407	63%
Reserve General Officer*	1,062	1,012	105%	475	974	49%
Active Medical Officer**	713	685	104%	357	840	43%
Reserve Medical Officer**	259	192	135%	104	279	37%

*Does not include accessions from the United States Naval Academy or Naval Reserve Officer Training Corps.

**Medical Officer includes Medical Corps, Nurse Corps, Dental Corps, and Medical Service Corps.

My priorities for officer recruiting are:

Health Professionals. To support the increased demand for health professionals in support of combat operations, we have implemented a multi-faceted approach. This includes:

- Increasing Critical Wartime Skills Accessions Bonus (CWSAB) and allowing multi-year payouts
- Increasing incentive and retention pays for critical healthcare specialties

- Increasing the monthly stipend for medical and dental Health Professions Scholarship Program (HPSP) recipients
- Exploring a one-year pilot program to access qualified legal non-citizens
- Offering the Health Professions Loan Repayment plan for critical medical specialties.

As of 31 January 2009, we have attained 43 percent of the FY09 active medical officer recruiting goal and 37 percent of the reserve goal.

Diversity. In our desire to remain competitive for the best talent in the nation, we continue leveraging relationships with key influencers and science, technology, engineering, and mathematics (STEM)-based affinity groups. We have made great strides expanding Naval Junior Reserve Officer Training Corps (NJROTC) into highly diverse markets. We will add 20 new NJROTC units resulting in a total of 646 participating schools in the coming year, providing opportunities for approximately 2,500 more cadets. Additionally, we are expanding our Naval Reserve Officer Training Corps (NROTC) program.

RETENTION

The current national economy, coupled with the comprehensive benefits and compensation of military service, have resulted in higher retention and lower attrition than predicted for this fiscal year. In FY08, active enlisted retention was approximately one percent above projections and there were 4,221 (14 percent) fewer enlisted attrition losses than anticipated. We also experienced higher retention rates across the officer force. These patterns have accelerated into this fiscal year.

In the reserve force, we anticipate higher retention and fewer losses than planned in both the enlisted and officer populations. Current policies and adjusted enlisted prior service accessions will help to minimize over-execution. Our goal is to finish the fiscal year with a stable, balanced inventory of reserve Sailors matched to fleet demand.

Active Navy Enlisted Retention

Active Navy Retention	FY08 Achievement				FY09 Achievement (as of 3 Jan 2009)			
	Reenlisted	Mission	FY08	FY08 Goals	Reenlisted	Mission	FYTD	FY09 Goals
Zone A (0-6 yrs)	13,005	12,700	102.4%	12,700	3,481	3,174	110%	13,300
Zone B (6-10 yrs)	8,358	8,500	98.3%	8,500	2,863	2,735	105%	9,400
Zone C (10-14 yrs)	5,147	5,000	102.9%	5,000	1,721	1,601	107%	6,000

Control Grade Officers. Though officer retention rates have generally increased, there remain select shortfalls in the control grades (O4-O6). Commander (O-5) and lieutenant commander (O-4) inventories are below requirements; though, for the first time in many years, Unrestricted Line (URL) captain inventory exceeds officer programmed authorizations (OPA). Special and incentive pays and quality of life initiatives remain the primary tools to reduce these shortfalls.

Active Control Grade Inventory versus OPA

Rank	Unrestricted Line		Restricted Line and Staff	
	Inventory	FY09 OPA*	Inventory	FY09 OPA
O6	1,395	1,361	1,808	1,877
O5	2,930	3,046	3,559	3,653
O4	4,280	4,461	5,203	5,702
Total	8,605	8,868	10,570	11,232

Health Professionals. Medical community loss rate trends improved in FY08. While incentives and bonuses have contributed to reduced loss trends, select subspecialties continue to require attention. These include: dentistry, clinical psychology, social work, psychiatry, general surgery, and perioperative nursing. Special and incentive pays are critical to retaining these professionals.

Medical Community Loss Rates

Community	FY05	FY06	FY07	FY08
Medical Corps	10.4%	9.6%	10.2%	8.2%
Nurse Corps	9.8%	11.4%	10.0%	9.2%
Medical Service Corps	10.2%	10.2%	9.4%	9.0%
Dental Corps	13.0%	14.3%	14.7%	10.7%

Tone of the Force

The tone of the force is positive. We poll extensively and track statistics on personal and family-related indicators such as stress, financial health, and command climate, as well as Sailor and family satisfaction with the Navy. The results indicate that Sailors are satisfied with the morale of their command, leadership, education benefits, health care, and compensation. Despite the current economic situation, the majority of our Sailors are not experiencing severe financial stress. Results of our January 2009 Financial Health Quick Poll reveal that 82 percent of officer and 54 percent of enlisted rate their personal financial situation as “excellent” or “good,” compared to 41 percent in the U.S. population¹. For those who reported experiencing financial stress, housing-related expenses were the primary concern.

Suicide Prevention. We continue our efforts at suicide prevention through a multi-faceted system of communication, training, and command support. Our approach is to foster resilience among Sailors; identify and mitigate stress reactions that can lead to increased potential for suicide; and create an environment supportive of good psychological health, in which stress and other suicide related factors can be more openly recognized, discussed, and addressed.

Suicide is the third leading cause of death in the Navy after accidents and natural causes. In calendar year 2008, Navy’s suicide rate increased slightly over the previous year to 11.6 per 100,000 Sailors. This number represents a total of 41 suicides. The rates for accidents and natural causes per 100,000 Sailors were 26.3 and 12.7, respectively². Since formal suicide prevention programs began in 1998, Navy has averaged 10.7 suicides per 100,000 Sailors.

¹ October 15, 2008 Pew Research Center for the People and the Press Survey Report (p.2).

² Data pulled from the Defense Casualty Information Processing System (DCIPS).

While significantly lower than the national rate of 18.8 per 100,000 individuals³, for the same age and gender demographic, we remain vigilant on this critical issue with a primary focus on prevention.

Navy continues to develop and enhance programs designed to remove the social stigma of seeking help and, which target substance abuse prevention, personal financial management, positive family relationships, physical readiness, and family support—all of which reduce individual stress. We continue to work to address and minimize potential adverse effects of suicide risk factors and to strengthen associative protective factors through training, intervention, response, and reporting. Suicide prevention is an all-hands effort, spanning the continuum of our Total Force, from the most senior Navy leadership to our newest recruits.

Sailor and Family Support

Our programs are designed to support those Sailors forward deployed, enhance career flexibility, and improve overall life-work integration. Additionally, we will support the force through a comprehensive “continuum of care” that meets the full spectrum of needs for Sailors and their families from accession to retirement.

Individual Augmentation (IA)/GWOT Support Assignment (GSA) Detailing. Significant progress has been made in filling IA requirements, particularly for high-demand skill sets. In many cases, using a Total Force approach, Navy has fulfilled these requirements with qualified individuals from lesser-stressed communities. This flexible response, coupled with effective strategic communications to the Fleet, reduced some of the uncertainty associated with repeat IA

³ Data based on the Center for Disease Control's National Vital Statistics Report "Deaths: Final Data for 2005." Normalized rate calculated by the Navy Health Research Command.

deployments and helped provide predictability and stability for Sailors and their families while improving Navy's responsiveness to the Combatant Commanders.

Through GSA Detailing, a practice designed to minimize disruption in the lives of Sailors and their families through assignment to IA tours between permanent duty stations, we continue to fill joint warfighting requirements and the majority of critical IA leadership positions through mainstream assignment processes. This approach affords Sailors increased influence over the timing of their IA assignments, improves individual career management, and offers longer lead-times; thereby, improving Sailor readiness and family preparedness for prolonged deployments. Initial Fleet response to GSA Detailing has been positive. In FY09, approximately 47 percent of our total IA assignments are GSA details.

Life-Work Integration. The FY09 National Defense Authorization Act (NDAA) authorized 10 days of non-chargeable paternity leave for married service members whose wives give birth to a child on or after October 14, 2008. We are appreciative of Congressional support for this legislation and anticipate over 15,000 Sailors will benefit from this entitlement each year.

Additionally, the FY09 NDAA provides Service Secretaries the authority to test the effectiveness of an alternative career retention option in fields where monetary incentives alone have not produced the desired retention results. We have learned that flexibility is one of the keys to retaining our younger Sailors. In an effort to enhance career flexibility, Navy is piloting a Career Intermission Program, allowing 20 officer and 20 enlisted members annually to transfer from active duty to the Individual Ready Reserve (IRR) for up to three years.

In addition to the Career Intermission Program, other Navy initiatives include telework, compressed work schedules, and a virtual command program, which provides an opportunity for a small initial group of officers to maintain geographic stability. Leveraging current technology, these options enable us to provide Sailors and their families with increased predictability and stability while providing improved quality of life. We are assessing the feasibility of implementing other programs designed to increase flexibility of choice within traditional career paths. We believe that innovative, flexible career paths will provide increased retention by complementing monetary incentives.

Continuum of Care. Navy's "continuum of care" is a network of services and caregivers that ensures Sailors, whether they are healthy or become wounded, ill, or injured, receive the highest quality care. We continuously evaluate and improve policies and programs associated with the continuum of care to be certain they are meeting their intended objectives. Our continuum of care spans all aspects of individual medical, physical, psychological, and family readiness. Navy Safe Harbor, Navy's Operational Stress Control Program, Deployment Health Assessments, the Warrior Transition Program, and the Returning Warrior Workshop are critical elements of this continuum.

Over the past year, Navy Safe Harbor has expanded its mission to non-medical support for all seriously wounded, ill, and injured Sailors and their families, increasing its capabilities with the establishment of a headquarters element to support Recovery Care Coordinators and Non-medical Care Managers covering 15 locations. With these changes, Safe Harbor's enrolled population has increased from 145 to 330. Safe Harbor is providing recovering Sailors a lifetime of individually tailored assistance designed to optimize the success of their recovery, rehabilitation, and reintegration activities.

Navy's Operational Stress Control (OSC) program provides a comprehensive approach designed to address the psychological health needs of Sailors and their families throughout a career. It is a program that is supported by Navy Medicine and promotes psychological health while reducing the stigma associated with requesting help. To date, Basic OSC Awareness Training has been provided to over 7,300 Sailors at various venues across the country. Formal curriculum at key nodes of training throughout the career of a Sailor (from accession to flag officer) will be developed and delivered this fiscal year.

The Warrior Transition Program (WTP) was established in Kuwait and provides a place and time for individual augmentees (IA) to decompress and transition from a war zone to life back home. The WTP includes small group discussion facilitated by accredited professionals and focuses on combat and operational stress, gear return, and fleet and family support center briefings. Trained providers include two chaplains and two psychiatric registered nurses. Since January 2008, over 320 classes with over 7,100 returning IAs have taken place. Additional Mobile Care Teams are being developed to deploy to Iraq and Afghanistan to provide a means of reaching out to IAs during mid-tour.

The Returning Warrior Workshop (RWW) is a vital reintegration event that provides support for both active and reserve Sailors and their families. The RWW is designed to identify problems, encourage members to talk about their experiences, direct family members to resources, improve the mobilization/demobilization process, and honor the sacrifices of Sailors and their families. The RWW is an important first step in the demobilization and reintegration process for the Total Force and their families. Since January 2007, over 1,000 service members

and 800 family members have attended one of 16 RWWs throughout the country. An additional 33 RWWs are scheduled through July 2010.

In addition to these programs we have been aggressively monitoring compliance with the new Deployment Health Assessment (DHA). DHA is a DoD-mandated instrument used to screen Sailors prior to deployment and to identify health concerns after deployment with Post-Deployment Health Assessments (PDHA) and Re-assessments (PDHRA). We have enhanced policy oversight on DHA to include monthly reports to Navy leadership and a Navy-wide review of records to validate compliance is underway.

Retention through Targeted Investments

Given the change in retention and loss behavior, we are focused on stabilizing the force through a targeted investment approach—reducing or eliminating monetary incentives where they are not needed and continued investment in critical skills.

First-term nuclear operators are my number one retention priority. Currently, the Naval Nuclear Propulsion Program (NNPP) is 922 Sailors short of manning requirements across all zones, and is falling 20 percent short of required retention goals for first term reenlistments. Meeting retention goals continues to be challenging as nuclear trained enlisted are in high demand in civilian nuclear and conventional energy production, as well as other highly technical fields. We are addressing this challenge with an enhanced monetary incentive through a significant increase in the Selective Reenlistment Bonus (SRB) program, offered for a finite period. The intent is to elicit an immediate and significant increase in retention rates in skills that have shown an inelastic response to incremental increases in bonus rates. This "limited time

offer" is our test of the elasticity of the demand. We will use the results to evaluate future retention initiatives.

The technical, leadership, and management expertise developed in the NNPP are highly valued in the civilian workforce. Consequently, nuclear officer retention remains a challenge. We have met our submarine officer retention goals only once in the past five years, and we expect to fall two percent short of our target in FY09. This decline has contributed to Navy's current shortage of officers with greater than nine years of commissioned service. The submarine force is currently 452 officers short of requirements to man critical billets Navy-wide. Additionally, the nuclear-trained surface warfare community continues to experience the lowest junior officer retention of any URL community. To positively influence retention, Navy aggressively uses monetary incentives authorized under the Nuclear Officer Bonus and Incentive Pay consolidated authority in title 37, U.S.C., Section 333.

END STRENGTH

Navy is currently transitioning from a posture of reducing end strength to one of "stabilizing the force." Since 2003, Navy active duty end strength declined from 382,235 to 332,228, at a rate of approximately 10,000 per year. While end strength declined, we have increased operational availability through the Fleet Response Plan, supported new missions for the joint force, and introduced the Maritime Strategy.

Navy continues to play a vital role in support of ongoing combat operations in Afghanistan (Operation Enduring Freedom (OEF)) and Iraq (Operation Iraqi Freedom (OIF)) across a wide range of mission areas, including detainee operations, training teams, provincial

reconstruction teams, counter improvised explosive device (IED) missions, construction (Seabee), explosive ordnance disposal (EOD), airfield support, public affairs, logistics, intelligence, and medical support. We are planning to provide up to 14,100 Sailors as individual augmentees in the role of joint force enablers. We anticipate this demand to continue into the next fiscal year. Although Navy has traditionally sourced the IA requirement through baseline end strength, we can no longer sustain this approach without an adverse impact on readiness.

Navy has no Stop Loss in effect and no plans to use this manpower management tool in the foreseeable future. Used sparingly and very briefly in the past, Navy Stop Loss was discontinued in May 2003.

Beginning in FY10, Navy will start to reverse 2,383 previously planned military-to-civilian health profession billet conversions scheduled for FY10-FY12. The full 4,204 billet reversals and restorations will be completed by FY13.

To meet these demands, maintain required Fleet manning levels, and minimize stress on the force, the Secretary of the Navy authorized the force to over-execute end strength in FY08. Utilizing national emergency end strength waiver authority, Navy finished the year with an end strength level of 332,228, approximately one percent above our statutory end strength authorization of 329,098. We anticipate that we will finish this fiscal year within two percent above our authorized level of 326,323. As we move past this fiscal year, we expect Navy end strength to stabilize at approximately 329,000 personnel to support current Fleet manning as well as the joint force. We continue to assess our end strength posture to balance not only the number of personnel, but also the experience, skills, and seniority of the force against our projected requirements.

Navy Reserve end strength has declined by approximately 20,000 Sailors from 2003 through 2008 (88,156 RC Sailors in 2003 to 68,136 RC Sailors in 2008). The anticipated steady-state end strength is approximately 66,000 in FY13. During FY08, to provide for a stable RC inventory, we implemented several force shaping measures that included a reduction in prior service accessions, as well as proactive management of Transient Personnel Units (TPUs), overmanned designators, and Sailors reaching high-year tenure. These measures proved to be effective, as the Navy ended FY08 with 68,136 RC personnel (approximately 0.5 percent above our statutory end strength authorization of 67,800).

Stabilizing the Force

As previously discussed, we have experienced higher than expected retention and fewer losses across the enlisted force. For Sailors with 10 years of service, reenlistment rates are six percent higher than the previous two years. Among those Sailors with 10 to 14 years of service, we are experiencing a retention rate that is approximately three percent higher. Overall attrition, defined as Sailors who are discharged prior to the end of their contract, has declined approximately 24 percent from the previous year. Specifically, we have seen declines in misconduct related discharges by 26 percent, medical/physical discharges by 22 percent, and training-related discharges by 12 percent. The net effect is over-manning in some specialties in certain year groups. To maintain the force balance in terms of seniority, experience, and skills we have taken, or will take, following actions:

- Reduce FY09 enlisted accessions by 3,000
- Transition to newly-enacted consolidated special and incentive pay authorities

- Decrease or eliminate Selective Reenlistment Bonus (SRB) levels and review all other bonus programs
- Execute “High-Year Tenure” milestone for the enlisted force of 14 years of service for those Sailors who have not advanced beyond E-5
- Expand “Perform-to-Serve,” a reenlistment review process used in Zone A (0-6 years), to Zone B (6-10 years) and Zone C (10-14 years) in select overmanned ratings forcing conversion to undermanned specialties or separation
- Institute an annual performance-based continuation board for E7–E9 with over 20 years of service.
- Establish greater control of conditional extensions
- Allow one year time-in-grade retirement waivers for select senior enlisted in pay grades E-7 to E-9.

In our officer corps, we are experiencing similar behaviors. From 2005-2008 overall officer loss rates remained relatively stable (8.1 to 8.43 percent); the forecasted trend for FY09 shows a loss rate of less than eight percent. Higher than expected retention has resulted in 17 of 31 communities being over manned, with most imbalances occurring in the junior officer ranks. To properly shape our officer force, we are implementing several measures:

- Reviewing records of probationary officers (those with less than six years of commissioned service) who have failed their initial warfare pipeline training or whose records are flagged for legal, physical fitness, or security clearance issues, and separate those with limited potential for future service
- Restricting the number of officers in a retire-retain status (i.e., retaining a member past statutory retirement)

- Allowing only those officers with specialized skills to withdraw a previously approved retirement or resignation request
- Allowing one-year waivers of active duty minimum service requirement in targeted communities
- Allowing one year time-in-grade retirement waivers for select officers in pay grades O-5 and O-6
- Review bonus program levels.

A future component of our force stabilization efforts will be to provide opportunities for Sailors to seamlessly transition between active and reserve service throughout their careers. We are working to identify legislative, financial, management, and policy barriers impeding a quick and efficient transition between components to meet changing workforce demands. One of our key initiatives is implementing a process to transition Sailors between the active component and the reserve component within 72 hours. This continuum of service approach will ultimately enhance the effectiveness of the Navy Total Force.

CONCLUSION

Our mission remains to:

- Align the personal and professional goals of our workforce with the needs of the joint force, while ensuring the welfare of our Sailors and their families
- Deliver a high-performing, competency-based, and mission-focused force to meet the full spectrum of joint operations

- Provide the right person with the right skills at the right time at the best value to the joint force.

Our vision is a seamless Navy Total Force valued for a lifetime of service. On behalf of all the men and women in uniform who sacrifice daily and their families, I want to extend my sincere appreciation for your unwavering support for our Navy. Thank you.

Mr. MURTHA. General Coleman.

SUMMARY STATEMENT OF GENERAL COLEMAN

General COLEMAN. Chairman Murtha, distinguished members of the Subcommittee, it is my privilege to appear before you today to discuss Marine Corps personnel.

I would like to make a few key points.

First, in regard to our end strength growth, the Marine Corps achieved unprecedented success in fiscal year 2008, growing by over 12,000 Marines; and we fully expect to reach our goal of 202,000 during fiscal year 2009, 2 years ahead of schedule. We owe this historic success in large part to our recruiters, who continue to meet all accession goals while maintaining the highest quality standards.

Thank you for your continued support of our enlisted incentives, which help to make this achievement possible.

Secondly, our active component retention continues to be successful. In fiscal year 2008, we achieved an unprecedented 36 percent retention rate among our first-term Marines and are building on that success so far in 2009.

We thank you for your support of our selective reenlistment bonus program. It will remain the foundation of our retention efforts as we work to maintain vital Marine Corps leadership and experience.

Third, I want to reiterate that a top priority of the Commandant of the Marine Corps is caring for our wounded warriors and for the families of all our Marines. Our Wounded Warrior Regiment is diligently at work implementing a new and historic approach to wounded warrior care which makes thriving, not just surviving, the expectation of our wounded, ill, and injured Marines. Likewise, our family readiness programs have undergone a host of significant improvements which continue today.

In closing, I want to thank you and the other Members of Congress for your support and partnership. They have been central to the strength that your Marine Corps enjoys today. It will continue to be essential as we work to shape the Marine Corps for the future so that we will always remain the most ready when the Nation is least ready.

I look forward to answering your questions.

[The statement of General Coleman follows:]

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STATEMENT

OF

LIEUTENANT GENERAL RONALD S. COLEMAN

DEPUTY COMMANDANT FOR MANPOWER AND RESERVE AFFAIRS

UNITED STATES MARINE CORPS

BEFORE THE

DEFENSE SUBCOMMITTEE

OF THE

HOUSE APPROPRIATIONS COMMITTEE

CONCERNING

PERSONNEL

ON

MARCH 19, 2009



Lieutenant General Ronald S. Coleman
Deputy Commandant
for
Manpower and Reserve Affairs



Lieutenant General Ronald S. Coleman is the Deputy Commandant for Manpower and Reserve Affairs.

General Coleman joined the Navy in April 1968 and was discharged upon his return from Danang, Republic of Vietnam in June 1970. Upon graduation from Cheyney State University in 1973, he was commissioned a Second Lieutenant in December 1974. Following the Basic School in 1975, he reported to Camp Lejeune with 2d Marine Regiment and served as the Regimental Supply Officer, Platoon Commander, and S-4A.

In November 1977, he transferred to 3d Force Service Support Group, Okinawa, Japan, and deployed with Landing Support Unit Foxtrot.

In November 1978, he reported to Officer Candidate School and served as the S-4, Supply Officer, Candidate Platoon Commander and Director, Non-Commissioned Officer School. He attended Amphibious Warfare School during the 1981-82 academic year and was then transferred to HQMC Officer Assignment Branch, and served as a company grade monitor and Administrative Assistant to the Director, Personnel Management Division. In August 1985, Major Coleman was assigned as an Instructor at Amphibious Warfare School. In 1987, he attended the Marine Corps Command and Staff College.

In 1988, he returned to Okinawa and served as the Operations Officer, 3d Landing Support Battalion; Executive Officer, 3d Maintenance Battalion; and Commanding Officer, Combat Service Support Detachment 35, Contingency Marine Air Group Task Force 4-90.

In June 1991, he reported to HQMC and served as the Logistics Project Officer and Head, Maintenance Policy Section, Installations and Logistics Branch. He was promoted to Lieutenant Colonel in May 1992.

In June 1993, he assumed duty as Commanding Officer, 2d Maintenance Battalion, 2d Force Service Support Group, and in December 1994, was reassigned as the Group Deputy Operations Officer. In August 1995, he reported to the Industrial College of the Armed Forces, National Defense University.

In 1996, he reported to the Pentagon in the Logistics Directorate J-4, as Deputy Division Chief, Logistic Readiness Center.

He was promoted to colonel in July 1997 and returned to Camp Lejeune in 1998 for duty with the 2d Marine Division as the Assistant Chief of Staff, G-4. In April 1999, he deployed to the Balkan Region and served as J-4, Joint Task Force Shining Hope. He assumed command of 2d Supply Battalion in July 1999. In June 2001 he reported to HQMC as the Assistant Deputy Commandant Installations and Logistics (Facilities) and was promoted to brigadier general in November 2002.

General Coleman reported to 2d Force Service Support Group in June of 2003 and deployed in support of Operation Iraqi Freedom as Commanding General Special Purpose MAGTF until November 2003. He deployed again from February 2004 until June 2004 as Commanding General, Combined Joint Task Force Haiti, in support of Operation Secure Democracy.

General Coleman was assigned as the Director, Personnel Management Division on 1 July 2005 and was frocked to Major General in May 2006.

On 29 September 2006, General Coleman was assigned to his current position and appointed to the rank of Lieutenant General.

Chairman Murtha, Congressman Young, and distinguished Members of the Subcommittee, it is my privilege to appear before you today to provide an update on Marine Corps personnel.

I. Introduction

We remain a Corps of Marines at war with over 22,000 Marines deployed in support of Operations IRAQI FREEDOM and ENDURING FREEDOM. The young men and women who fill our ranks today recognize the global, protracted, and lethal nature of the challenges facing our Nation, and their dedicated service and sacrifice rival that of any generation preceding them. The individual Marine is our Corps' most sacred resource.

Over the past several years, sustained deployments in Iraq, Afghanistan, and across the globe have kept many Marines in the operating forces deployed as much as they have been home. They have shouldered our Nation's burden and done so with amazing resiliency. Marines understand what is required of the Nation's elite warrior class — to stand up and be counted when the Nation needs them the most. For this, we owe them our unending gratitude.

Marines and their families know that their sacrifices are making a difference, that they are part of something much larger than themselves, and that their Nation stands behind them. Thanks to your continued support, your Marines will stay resolved to fight and defeat any foe today or in the future.

II. End Strength

Active Component End Strength. The Marine Corps grew by over 12,000 Marines in Fiscal Year 2008 and currently stands at over 201,000. We are on pace to reach an active duty end strength of 202,000 by the end of Fiscal Year 2009 – two years ahead of schedule. This historic growth can be attributed to three factors: quality recruiting, historic retention levels, and

reduced attrition. Based on building a robust Delayed Entry Pool Program, we expect these trends to continue into Fiscal Year 2010 allowing us to sustain a 202,000 end strength. While the state of the Nation's economy is a concern for all of us, we expect that it will positively impact both recruiting and retention this year.

We are currently ahead of Fiscal Year 2008 in first term enlistments and are on track with our career reenlistments; our recruiting standards remain high. Attrition levels are projected to remain at or below Fiscal Year 2008 rates. Sustaining the 202,000 end strength will enable your Corps to train to the full spectrum of military operations and improve the ability of the Marine Corps to address future challenges. This growth will also enable us to increase the dwell time of our Marines so that they are able to operate at a "sustained rate of fire." Our goal is to achieve a 1:2 deployment-to-dwell ratio for all of our active forces - for every seven months a Marine is deployed, he or she will be back at home station for at least fourteen months.

Funding. The Marine Corps greatly appreciates the increase in authorized end strength to 194,000 passed in the Fiscal Year 2009 National Defense Authorization Act. In Fiscal Year 2009, we are funding the end strength in excess of 194,000 through supplemental appropriations. The vast majority of our personnel budget is spent on entitlements including compensation, which is a double-edged sword.

Compensation is a principal factor for Marines when deciding whether to reenlist. Private sector competition will always seek to capitalize on the military training and education provided to our Marines. Marines are a highly desirable labor resource for private sector organizations. Competitive and flexible compensation authorities aid the Marine Corps in targeting specific areas and provide the capability to access, retain, and separate as needed. Your support for our Enlistment Bonus and Selective Reenlistment Bonus programs has made a

difference and will continue to be a key to sustaining our end strength and ensuring the right mix, right grades, and overall effectiveness of our Total Force. We appreciate the continued support of Congress in the creation of flexible compensation authorities that allow the Marine Corps to shape your Corps for the 21st Century.

Reserve Component End Strength. Our Reserves continue to make essential contributions to our Total Force efforts in The Long War, particularly in Iraq and Afghanistan. As we accelerated our build to 202,000 Active Component Marines during the past fiscal year, we understood that we would take some risk with regard to obtaining our Reserve Component end strength of 39,600. As a result we came in under our authorized limit by 2,077. During the 202,000 build-up, we adjusted our accession plans and encouraged our experienced and combat-tested Reserve Marines to transition back to active duty to support these efforts. They responded in force. From 2007 to present, approximately 1,946 returned to active duty or are awaiting return.

As a Total Force Marine Corps, we rely heavily upon the essential augmentation and reinforcement provided by our Reserve Marines. We believe our authorized end strength of 39,600 is appropriate and provides us with the Marines we require to support the force and to achieve our goal of a 1:5 deployment-to-dwell ratio for our Reserves. With the achievement of a 202,000 Active Component force, we will refocus our recruiting and retention efforts toward our authorized Reserve Component end strength. The bonus and incentives provided by Congress, specifically the authorization to reimburse travel expenses to select members attending drill, will be key tools in helping achieve this goal.

III. Recruiting

Our recruiters continue to make their recruiting goals in all areas in support of our Total Force recruiting mission. Our focus in Fiscal Year 2009 will be to continue to recruit quality men and women with the right character, commitment, and drive into our Corps. To meet the challenges in today's recruiting environment, it is imperative that we maintain our high standards both for our recruiters and those who volunteer to serve in our Corps. The Corps must continue to be comprised of the best and brightest of America's youth. We must also remain mindful that the Marine Corps needs to reflect the face of the nation and be representative of those we serve. Our image of a smart, tough, elite warrior continues to resonate with young people seeking to become Marines.

The Marine Corps is unique in that all recruiting efforts (officer, enlisted, regular, reserve, and prior-service) fall under the direction of the Marine Corps Recruiting Command. Operationally, this provides us with tremendous flexibility and unity of command in order to annually meet our objectives. In Fiscal Year 2008, the Marine Corps achieved 100 percent of the enlisted (regular and reserve) ship mission (accessions). In terms of quality, Marine Corps Recruiting Command accessed over 95 percent Tier 1 high school diploma graduates and over 66 percent in the upper Mental Groups of I-IIIAs. In short, we accomplished our recruiting mission, achieved the Commandant's quality standards, and exceeded Department of Defense quality standards.

In Fiscal Year 2009, the Total Force accessions mission is 39,296 and, as of 28 February 2009, we have shipped (accessed) 14,785 applicants, representing over 104 percent of our Total Force mission fiscal year to date. Although recruiting is highly dynamic and fluid, we expect to meet our annual recruiting mission this fiscal year, to include all quality goals. Additionally, we

continue to exceed our contracting goals for this fiscal year which ensures we have a population of qualified individuals ready to ship to recruit training as we enter Fiscal Year 2010. Achieving this success, as always, is dependent on your support for our enlistment incentives. We thank you for this support both now and in the future.

Our Officer Selection Teams were also successful in Fiscal Year 2008, accessing 1,900 Second Lieutenants for 100 percent of their assigned mission. In Fiscal Year 2009, we are continuing efforts to attract Officer Candidates and commission Second Lieutenants commensurate with our end strength requirements. To assist our Officer Selection Officers in meeting their Officer Accession missions and attract prospective candidates we are continuing to leverage two programs that were introduced in 2007: The College Loan Repayment Program, which provides up to \$30,000 of undergraduate student loans for graduating college seniors upon commission as a Second Lieutenant, and the Officer Accessions Incentive, which provides \$4,000 to college graduates (Officer Candidate Course and Enlisted Commissioning Program) upon commissioning as a Second Lieutenant.

For the Reserve Component, the Marine Corps achieved its Fiscal Year 2008 reserve enlisted recruiting goals with the accession of 4,235 non-prior service Marines and 4,501 Prior Service Marines. As of 28 February 2009, we have accessed 2,070 non-prior service and 1,502 enlisted prior service Marines, which reflects 48 percent of our annual enlisted mission. Again, we expect to meet our reserve recruiting goals this year. Officer recruiting for our Selected Marine Corps Reserve units is traditionally our greatest challenge. To date, the Officer Candidate Course – Reserve has proven to be the most successful of our reserve officer recruiting programs, specifically focusing on ground-related billets tied to the Force Generation Model. Under this program, individuals attend Officer Candidates School, The Basic School, a

Military Occupational Specialty school, and return to a reserve unit to serve. We commissioned 56 Second Lieutenants in the Reserve in fiscal Year 2008, and we anticipate commissioning between 50 and 75 more this fiscal year.

IV. Retention

Retention complements recruiting as one of the vital elements of building and sustaining the Marine Corps. For enlisted retention, we seek to retain the best and brightest Marines in both our First Term and Career Force to provide the proven technical skills, experience, and Non-Commissioned Officer and Staff Noncommissioned Officer leadership needed to meet our demanding mission. In Fiscal Year 2008, the Marine Corps reenlisted 16,696 Marines including an unprecedented 8,243 First Term Marines. This achievement represented the highest retention rate, almost 36 percent, among the eligible First Term population compared to 31 percent in Fiscal Year 2007 and 22 percent in Fiscal Year 2006. Similarly, the Marine Corps achieved a remarkable 77 percent retention rate among the eligible career force compared with 70 percent in Fiscal Year 2007 and 65 percent in Fiscal Year 2006. This achievement contributed to exceeding the annual milestone in our end strength increase plan while maintaining all quality standards.

For Fiscal Year 2009, retention achievement remains exceptionally strong. As of 28 February 2009, we have achieved 7,227 First Term Alignment Plan reenlistments, over 98 percent of the 7,334 goal. Equally impressive, we have achieved 7,127 Subsequent Term Alignment Plan reenlistments, over 95 percent of the 7,464 goal. Altogether, we have achieved 14,354 total reenlistments, or nearly 97 percent of the combined goals. Our continuing retention success remains largely attributable to two important, enduring themes. First, Marines are truly motivated to “stay Marine” because they are doing what they signed up to do — fighting for and

protecting our Nation. Second, they understand our service culture is one that rewards proven performance and takes care of its own.

In regard to the Reserves, officer retention is above historical norms. Enlisted retention, however, remains below historical norms in part due to the priority of building an Active Component end strength of 202,000. For Fiscal Year 2009, we foresee continued higher retention in the Active Component, which will impact the number of Marines transitioning into the Reserves. We are no longer making a concerted effort to draw personnel from the Reserves to increase our active forces. We are refocusing our efforts on increasing Reserve end strength and are reviewing the best ways to accomplish this. In this regard, we appreciate the reenlistment incentives provided in the Fiscal Year 2009 National Defense Authorization Act.

V. Marine Corps Reserve

With the achievement of the 202,000 active duty force, we will refocus our recruiting and retention efforts to achieve our authorized Reserve Component end strength. One of the key recruiting elements and a focus is our Reserve junior officers and consequently meeting our company grade officer shortfalls. As previously noted, the Officer Candidate Course – Reserve (OCC-R) has proven to be the most successful of our three reserve officer recruiting programs. Our continued success in this area is a notable enhancement to the continuum of service for us and furthers the operational nature of our Reserve forces.

The departments within Headquarters, Marine Corps continue to work with the Office of the Secretary of Defense and the Secretary of the Navy to develop implementation plans on the recommendations from the report of the Commission on the National Guard and Reserves (CNGR). We were represented in all working groups reporting to the CNGR Steering Committee and have participated in all aspects of developing the DoD response to the

recommendations. We believe the spirit and intent of the Commission was very helpful in identifying avenues to strengthen and improve the Total Force.

VI. Civilian Marines

Civilian Marines continue to provide an invaluable service to the Corps as an integral component of our Total Force. With a population of over 30,000 appropriated and non-appropriated funded employees and foreign nationals, Civilian Marines work in true partnership with the active duty and play an important role in supporting the mission of the Marine Corps and The Long War. Our vision for the future not only defines what the Marine Corps will offer to, but what it expects from, its Civilian Marines. The Marine Corps is committed to improving their leadership skills and opportunities for training and education. Civilian employees are afforded the opportunity to advance their career development through centrally-managed programs administered through Headquarters, United States Marine Corps. For example, the Marine Corps Acculturation Program provides our civilians with the opportunity to understand their roles in supporting the mission of the Marine Corps — specifically, learning the Marine Corps' culture and history while also concentrating on the strategic mission of local commands. The Civilian Marine Mentoring Program is part of the Civilian Career and Leadership Development program, which helps transform our civilian workforce to face the challenges of the future. A web-based Civilian Workforce Development Application was designed to assist the Marine Corps with managing our civilian workforce development activities.

The Marine Corps is committed to implementing the National Security Personnel System along with other Department of Defense and Department of Navy agencies. Since January 2007, the Marine Corps has converted 6,400 employees to the National Security Personnel System across all Marine Corps organizations including overseas and field activities. Through this new

pay-for-performance system, employees are able to align job objectives to mission. Ongoing performance feedback, both formal and informal, is an important component of the system and is essential to increase employee engagement and foster a high performance culture.

VII. Information Technology

Ensuring accurate, timely pay is supported by our continued efforts to transform our manpower processes by leveraging the benefits of the Marine Corps Total Force System (MCTFS), the Department of Defense's only fully integrated personnel, pay, and manpower system. MCTFS seamlessly serves our active, reserve, and retired members; provides total visibility of the mobilization and demobilization of our reserve Marines; and ensures proper and timely payments are made throughout the process. MCTFS provides one system, one record — regardless of an individual's duty status. According to the most recent Defense Finance and Accounting Service's "Bare Facts" report, MCTFS continues to achieve a pay accuracy rate of over 99 percent for both our Active and Reserve Components. MCTFS has enabled the Marine Corps to move its pay and personnel administration to a predominately self-service, virtually paperless, secure, web-based environment. In Fiscal Year 2008, individual Marines and their leaders leveraged MCTFS' capabilities to process more than 3.65 million paperless transactions.

VIII. Taking Care of Our Marines and Our Families

While the ideals of service to Corps and Country have not changed, the conditions of service are constantly changing, as are the needs of our Marines and their families. Marines have reasonable expectations regarding housing, schools, and family support, and it is incumbent upon us to support them in these key areas. Marines make an enduring commitment to the Corps when they earn the title Marine. The Commandant has made it clear that the Corps, in turn, must, and will, continue to make an enduring commitment to every Marine and his or her family.

Transitioning Marine and Family Support Programs To A Wartime Footing. Over the past year, the Marine Corps initiated a multi-year strategy to transition family support programs to a wartime footing. To achieve this, we conducted a series of assessments for the purpose of documenting service levels and evaluating the current state and efficiency of Corps-wide Marine and family support programs and services. We heard the concerns of our Marines and their families and implemented key reforms at every level of command and aboard each installation. We also discovered that our commanders needed more specific guidance and resources from us to appropriately take care of their Marines and families or to refer them to available internal or external support services.

We have also solidified support to families through the establishment of a School Liaison capability and enhancements to our Exceptional Family Member Program (EFMP). As we continue implementing this transition, every program must contribute to the success of the Marine Corps. We can measure the effectiveness of programs through outcomes such as increased recruiting and retention, and evidence such as measurements of satisfaction in our Quality of Life Survey.

Family Support Programs. The Marine Corps Family Team Building Program (MCFTB) provides a strong support arm to the Unit Family Readiness Program and provides high-quality training that supports the life cycle of the Marine and family through mission, career and life events. We have expanded and enhanced our pre, during, and post-deployment training to address the increased demands and potential impact of multiple, sustained deployments on Marines and their families. We have developed an inventory of Lifeskills training courses that specifically address challenges of military life, but also personal and family life. Acknowledging the role extended family members play in fostering personal and family readiness, we have

expanded our family readiness support to include parents of single Marines. Finally, our MCFTB staff provides Unit Command Teams training on the roles, responsibilities and supporting tools that are available to foster personal and family readiness.

Central to our transformation efforts, we have expanded the depth and breadth of our family readiness training programs and established full-time Family Readiness Officer billets in more than 400 units, who serve as the focal point for families of our deployed Marines. As of 28 February 2009, we have filled nearly 400 of these positions and expect to be fully staffed by September 2009. The Family Readiness Officers will use the Mass Communication Tool, which enables simultaneous broadcast of communication via email, text messaging, or phone, and other technology enhancements to expand communications between Marines and their families.

We have completed assessments at our remote and isolated commands and initiated substantial improvements to infrastructure and quality of life programming with upgraded child care availability and support, playground equipment, youth sports equipment, fitness center equipment, bike paths, and facility improvements. These enhancements will further promote the sense of community required to form strong bonds among our Marine families that contribute so greatly to readiness.

We learned that effective communications with family members is of paramount importance, and for our families with deployed Marines, a critical quality of life requirement. In addition to the Mass Communications Tool described above, we have addressed this issue in a number of ways. To enhance our morale and recreation capability on installations as well as to better connect Marines and their families, the Marine Corps is installing wireless networks and access points at over 230 facilities across the Marine Corps. Full implementation is anticipated by August 2009. We are also testing a Morale-Portable Satellite Communications Suite (M-

PSC) that provides an internet and web-cam capability to Forward Operating Bases (FOBs) in Afghanistan where traditional "Internet Cafes" are unavailable. This not only provides Marines with an opportunity to connect with their families, but also provides a recreation outlet at these austere and remote locations. Two systems were delivered to our forces in Afghanistan in December 2008, and initial capability tests under these austere, combat conditions in the FOBs have been very encouraging.

These initiatives and others not only demonstrate the commitment of the Marine Corps to our Marines and their families, but also underscore the significance of Marine and family support to mission readiness. We have advanced the implementation of these initiatives through the use of much appreciated supplemental funding in Fiscal Years 2008 and 2009. Beginning in Fiscal Year 2010, the Marine Corps intends to sustain funding for these critical program enhancements in our baseline budget, not through supplementals.

Exceptional Family Member Program (EFMP) and Respite Care Program. Last year, I reported on our mission to establish a continuum of care for our Exceptional Family Member Program (EFMP) families. Recommendations from a rigorous internal functionality assessment have been implemented and we are actively helping nearly 6,200 families gain access to medical, educational, and financial services that may be limited or restricted at certain duty stations. The program is now fully staffed at both the installation and headquarters levels. A new Case Management System is on-line and allows the exchange of necessary information and provides a robust reporting capability to the Program Managers.

A Respite Care Program funded by the Marine Corps provides up to 40 hours of care per month to all enrolled families, and can be used in conjunction with the TRICARE Extended Care Health Option (ECHO) benefit. We are obtaining the help of the Bureau of Medicine and

Surgery and TRICARE to resolve access and availability to health care concerns at several bases, and legal counsel is now on staff to advise our exceptional family members on state and Federal entitlements and processes. Since expansion of the program, our EFMP families have frequently expressed their appreciation for the support provided by our Case Managers, who have helped them navigate the paths and nodes to obtain services.

Gaining access to services can be most challenging to families who have members diagnosed with Autism Spectrum Disorder. We sincerely appreciate the increased reimbursement rate for Applied Behavioral Analysis therapy that Congress approved for Fiscal Year 2009. More families will now be able to exercise their option to use the TRICARE ECHO program. However, the highly specialized services these families require are not always available. Additionally, we are evaluating how the Marine Corps can partner with other organizations to increase the availability of these specialized services in geographic areas where resources are currently lacking.

School Liaison. The education of over 52,000 school-aged children of Marine Corps parents directly contributes to the overall state of family readiness within our Corps. We recognize that our children, who are often as mobile as their military parents, face additional challenges associated with frequent moves between schools and educational systems of differing quality and standards. To address these challenges, we established School Liaison billets and are now fully staffed at each of our installations to help parents and commanders interact with local schools and districts.

The School Liaisons advocate for our school-aged children, and form partnerships with schools and other agencies, in an effort to improve access and availability to quality education as well as to mitigate education transition issues. School Liaisons are actively involved in efforts to

assist school districts in applying for available competitive and noncompetitive grants focusing on issues arising with military school-aged children. Complimenting these efforts, the Marine Corps is working with the Department of Defense to develop an "Interstate Compact on Educational Opportunity for Military Children" with states to enable reciprocal acceptance of entrance, subject, testing, and graduation requirements. As of 1 February 2009, 11 states have passed the Interstate Compact, and most others are in some stage of the legislative process.

Child Development Program and Meeting Potential Need. To ensure Children, Youth and Teen Programs continue to transition to meet the needs of our families, a Functionality Assessment was conducted in June 2008 to identify program improvements, such as the development of staffing models to improve service delivery, as well as recommendations to explore and redefine services to meet the unique and changing needs of Marines and their families living both on and off our installations. We will pursue initiatives in these programs in 2009 to improve the quality of life for the children of our Marines.

To address a wide variety of identified needs, we are using multiple strategies to increase our child care capacity, including expanded hours to address increased Operational Tempo, as well as through partnerships, on and off-base family child care, and Child Development Group Home spaces. We are now providing 16 hours of reimbursed respite care per month for families with a deployed Marine, and intend to increase respite care availability aboard our installations. In addition, the Marine Corps has expanded partnerships that provide long and short-term support for Marines and their families who are not located near our major installations. Through our partnership with the National Association of Child Care Resource & Referral Agencies, we have been able to provide an additional 798 child care spaces to geographically dispersed, deployed and severely injured service members' children.

We are currently providing 11,757 child care spaces and meeting 63.6% of the calculated total need. It is important to note that the Marine Corps has initiated rigorous data collection and analysis improvements. As a result, it will be necessary to correct the 2007 annual summary due to identified reporting errors. Our reported rate of 71% of calculated total need last year is more accurately stated as 59.1%.

We are not satisfied with our progress to date and have made plans for 10 Child Development Center Military Construction projects. Two of these projects were approved in 2008, and one has been approved in 2009. These approved projects will provide an additional 915 spaces. We are also considering additional modular Child Development Centers, subject to more detailed planning and availability of funds. Continued Congressional support will help us provide these needed facilities. As the needs of our families change, our program is committed to grow and adapt to meet these needs.

Combat Operational Stress Control (COSC). Marine Corps commanders are fully engaged in promoting the psychological health of our Marines, Sailors and their families. To enable leaders, individuals, and families to prepare for and manage the stress of operational deployment cycles, the Combat and Operational Stress Control Program encompasses a set of policies, training, and tools to recognize stress reactions early on and to manage them more effectively within operational units. Marine leaders are trained by mental health care professionals, with assistance from chaplains in the operating forces, to detect stress problems in warfighters as early as possible, and are provided the resources to effectively manage these stress problems in theater or at home base. This training is also being incorporated into formal Professional Military Education schools for both officers and senior non-commissioned officers, such as the Expeditionary Warfare School and the Staff Non-Commissioned Officer Advanced

Course. Additionally, through enhanced training tools such as hyper-realistic combat training in environments engineered to simulate the sights, sounds, and smells of combat, Marines and Sailors are taught to be tough and resilient. We have staffed full-time COSC training coordinator positions at each of our Marine Expeditionary Force headquarters. To assist with prevention, rapid identification, and effective treatment of combat operational stress, we are expanding our program of embedding mental health professionals in operational units – the Operational Stress Control Readiness (OSCAR) Program – to directly support all active and reserve ground combat elements and eventually all deployed elements of the Marine Air-Ground Task Force. This year, we begin to formalize the OSCAR program by making mental health professionals organic to the Divisions and Marine Forces Reserve. By Fiscal Year 2011, full OSCAR teams will be fielded to the Infantry Regiment level.

Post Traumatic Stress Disorder (PTSD). The science of diagnosing and treating PTSD continues to evolve. Research studies are underway to identify risk and protective factors to prevent PTSD and other stress-related illnesses such as anxiety disorder or depression. Better screening and referral of at-risk Marines is underway via the OSCAR program and standardized pre- and post-deployment health assessments. This will improve access to care and reduce stigma associated with PTSD. The Departments of Veterans Affairs and Defense have collaboratively established comprehensive guidelines, which are available to all services, for managing post-traumatic stress.

Traumatic Brain Injury (TBI). We continue to see TBI as a significant challenge, one we are meeting in coordination with the Department of Defense and Veterans Brain Injury Center (DVBIC). Many new cases represent older injuries that are just now being diagnosed and our expectation is that, with the institution of the Automated Neuropsychological Assessment

Metrics (ANAM) for all Marines, we will discover mild Traumatic Brain Injuries more promptly post-deployment.

While the Marine Corps is providing leadership and resources to deal with this problem, we cannot solve all the issues on our own. The Marine Corps continues to work closely with the newly established Defense Center of Excellence for Psychological Health and Traumatic Brain Injury to advance our understanding of PTSD and TBI, and to improve the care of all Marines. We are gratified by your continued support in this arena through funding of several research initiatives that explore ways to better treat our injured Marines.

Suicide Prevention. The loss of any Marine is a tragedy both for the family and for our Corps. We are actively engaged in prevention and early identification of problems that may increase the risk of suicide. Leaders at all levels are concerned about the increase in the number of suicides, up from 25 in 2006, 33 in 2007, to 41 confirmed or presumed incidents in 2008. Understanding that there is no single suicide prevention solution, we are committed to having an effect on the individual Marine through leadership and command involvement at all levels. As noted earlier regarding PTSD, we must reduce the stigma sometimes associated with seeking help. The Commandant has taken proactive action to address this issue. We are developing video messages on suicide prevention by commanders at all levels from Colonel and up, have established multiple web-based applications with information for use by leaders, Marines and their family members, have provided installation level training that encourages community involvement, and incorporated suicide prevention training into the Marine Corps Martial Arts Program.

In November, the Marine Corps Executive Safety Board, chaired by the Assistant Commandant of the Marine Corps, reviewed the suicide awareness and prevention program and

directed the development of a high-impact leadership training program, targeted at non-commissioned officers, to provide them tools to identify and assist Marines at-risk for suicide. We will also explore development of a web-based resource to assist Marines and their families with relationship-related problems.

The Marine Corps will continue to aggressively pursue suicide prevention initiatives; reevaluate existing programs designed to reduce the stressors most correlated with suicidal behavior; develop and distribute new prevention programs; and refresh and expand training materials.

Sexual Assault Prevention and Response. Sexual assault is a crime and we take every reported incident very seriously. In addition to the impact on its victims, the corrosive effect on unit and individual readiness is a matter of great concern. The Marine Corps has adopted policy and, in accordance with DOD's Sexual Assault Prevention and Response (SAPR) program, issued guidance designed to prevent sexual assaults within the Marine Corps and to assist those Marines and sailors assigned to Marine Corps units affected by sexual assault. We will implement the newly-established DoD strategy to address sexual assault at all levels of the Spectrum of Prevention.

A 2008 Government Accountability Office study reported several shortcomings in our program. To address these findings, we are refreshing our training program and have committed to hire four full-time regional Sexual Assault Prevention and Response Program coordinators. We have trained more than 3,000 victim advocates ready to provide assistance. All Marines receive sexual assault prevention and awareness training upon entry and are required to receive refresher training at least annually. The issue is also incorporated into officer and noncommissioned officer professional development courses and key senior leader conferences

and working groups. At the request of our field commanders, we have also increased the number of Marine Corps judge advocates who attend specialized training on prosecution of these crimes and have assembled a mobile training team to teach our prosecutors how to better manage these cases.

Personal Financial Management. In difficult economic times, our Marines and their families face challenges that are no different from the American population in general, such as taking on too much debt, incurring expenses of a new child, and increased housing costs. Our Marines also confront unique challenges because of their service, such as unexpected or short notice deployments, extended separations, and directed permanent reassignments, all of which can compound existing financial difficulties.

During July 2008, we conducted a Financial Quick Poll to help determine the level of financial stress on active duty Marines and their families as a result of the downturn in the economy. Of the over 9,000 Active Duty Marines who responded to the survey, 15% of enlisted Marines and 5% of officers classified themselves as being in financial distress. Respondents reported that the most frequent financial problems experienced within the past year were increases in utility, rent and insurance costs, and taking on excessive debt.

We appreciate the efforts of the Congress to address the payday lending problem. Following up on that positive legislation, we worked with the Navy-Marine Corps Relief Society to establish a quick assist loan program that offers a \$300 interest-free loan for emergency basic living expense needs. We also conducted a functionality assessment of our Personal and Financial Management Program in October 2008, and found deficiencies and opportunities for improvement that we will pursue in 2009. Anticipating that economic impacts may have become more pronounced, we will continue to monitor the Corps' financial health and the success of our

efforts to improve the program. In addition, we intend to conduct another survey in August of this year.

Casualty Assistance. Our casualty assistance program is committed to ensuring that families of our fallen Marines are treated with the utmost compassion, dignity and honor. We have taken steps to correct unacceptable deficiencies in our casualty reporting process that were identified in Congressional hearings and subsequent internal reviews. Marine Corps commands now report the initiation, status, and findings of casualty investigations to the Headquarters Casualty Section, which has the responsibility to ensure the next of kin, receive timely notification of these investigations from their assigned Casualty Assistance Calls Officer. The Headquarters Casualty Section is a 24-hour-per-day operation manned by Marines trained in casualty reporting, notification, and casualty assistance procedures. These Marines have also taken on the additional responsibility of notifying the next of kin of wounded, injured, and ill Marines. In October 2008, we implemented a mandatory training program for Casualty Assistance Calls Officers that includes a Web-based capability to expand the reach of the course. This training covers notification procedures, benefits and entitlements, mortuary affairs, and grief and bereavement issues. We will continue to monitor the effectiveness of these changes and make adjustments where warranted.

Recreation for the Recovering Marine. Recognizing the importance of providing recreational opportunities for our wounded, the Marine Corps has partnered with Pennsylvania State University to train recreation professionals on Inclusive Recreation for Wounded Warriors. This state-of-the-art training program for military recreation managers ensures that Marines and their families can create a “new normal” as soon as possible. Some of the best practices in place at our installations include: bowling; golf; expanded personal fitness training; and alternative

activities for those who have been diagnosed with TBI such as yoga, meditation, deep and shallow aquatic classes, personalized swim coaches, wall climbing, nutritional counseling, and referral to the “Back on Track” program.

Obtaining Quality of Life Feedback. The Commandant regularly conducts town hall meetings at our installations to hear the concerns of our Marines and their spouses. This provides the opportunity to address not only individual concerns and issues, but also helps program managers identify systemic issues. Having had the opportunity to participate in some of these town halls, I am encouraged by the progress we are making in identifying and addressing real Quality of Life concerns. As an example, we are participating in a working group with the Navy Bureau of Medicine and Surgery and TRICARE to resolve health care access and availability issues identified at several bases.

In late 2007, the Marine Corps conducted its fourth Quality of Life in the Marine Corps Study (prior studies were conducted in 1993, 1998, 2002). This is the first study conducted since the start of OIF/OEF, and it measured Marines and their spouses' perceptions and satisfaction with the quality of life across a wide range of issues. As a statement of the morale and character of today's Marine, this most recent study found that despite the Overseas Contingency Operations and the high operational tempo, Marines and family members are generally satisfied with their mission and the support provided by the Marine Corps. In fact, a very important finding from the study was that Marines with a deployment history in support of OCO actually have a slightly higher overall QOL score than their counterparts without a deployment history.

Spouses in particular were another good news story from this study. We found that there was an increase in overall and specific satisfaction across the board for the spouses when compared with the pre-OIF/OEF results from the 2002 study. Spouses strongly appreciate the

medical care benefit provided by the Marine Corps and, specifically: treatment; out of pocket expenses; availability of appointments; and promptness of payments. Spouses reported that the educational opportunities for their children had a positive impact on their desire to remain part of the Marine Corps. Spouses also reported high levels of satisfaction with the quality of professional child care they were receiving. We will continue to evaluate the findings from this important study in an effort to sustain the many QOL improvements and transformation efforts outlined in my statement.

IX. Wounded Warrior Regiment

The Marine Corps is proud of the positive and meaningful impact that the Wounded Warrior Regiment is having on wounded, ill, and injured Marines, Sailors, and their families. Less than two years ago, we instituted a comprehensive and integrated approach to Wounded Warrior care and unified it under one command. The establishment of the Wounded Warrior Regiment reflects our deep commitment to the welfare of our wounded, ill and injured, and their families throughout all phases of recovery. Our single activity provides active duty, reserve, and separated Marines with non-medical case management, benefit information and assistance, resources and referrals, and transition support. The nerve center of our Wounded Warrior Regiment is our Wounded Warrior Operations Center, where no Marine or family member is turned away.

The Regiment strives to ensure programs and processes adequately meet the needs of our wounded, ill, and injured and that they remain flexible to preclude a one-size-fits-all approach to that care. For example, we have transferred the pay and entitlements auditing authority from the Defense Finance and Accounting Service in Kansas City directly to the Wounded Warrior Regiment, where there is a comprehensive awareness of each wounded Marine's individual

situation. We have also designed and implemented a Marine Corps Wounded, Ill, and Injured Tracking System to maintain accountability and will eventually be used to facilitate case management for the Marine Corps Comprehensive Recovery Plan. To ensure effective family advocacy, we have added Family Readiness Officers at the Regiment and our two battalions to support the families of our wounded, ill, and injured Marines.

To enhance reintegration, our Job Transition Cell, manned by Marines and representatives of the Departments of Labor and Veterans' Affairs, has been proactively reaching out to identify and coordinate with employers and job training programs to help our wounded warriors obtain positions in which they are most likely to succeed and enjoy promising careers. One example is our collaboration with the U.S. House of Representatives to establish their Wounded Warrior Fellowship Program hiring disabled veterans to work in Congressional offices.

The Marine Corps also recognizes that the needs of our wounded, ill, and injured Marines and their families are constantly evolving. We must ensure that they are equipped for success in today's environment and in the future. In May 2008, the Regiment stood up the Future Initiatives and Transformation Team to assess current capabilities and develop future programs to ensure the Wounded Warrior Regiment anticipates and meets emerging requirements. The Regiment has also stood up an Assessment Cell as part of the Future Initiatives and Transformation Team to conduct assessments of WWR programs and services to obtain actionable data for comprehensive program adjustment and improvement.

One of the Regiment's most effective accomplishments thus far is the "Sergeant Merlin German Wounded Warrior Call Center." Established in December 2007, the Call Center is available 24/7 for Marines and Marine Veterans for assistance with benefit information and

assistance, resources and referrals, and community reintegration needs. Our Wounded Warrior Call Center not only receives calls from active duty and former Marines but also conducts important outreach calls. In the past year, we have contacted nearly 8,800 Marines and Marine Veterans wounded, ill, or injured since September 2001 to assess how they are doing and to offer our assistance. Our Call Center has been critical to our success in helping wounded, ill, and injured Marines and in averting potentially tragic circumstances. Our trained Call Center staff is primarily former and retired Marines or family members of Marines. These dedicated individuals are not only skilled at providing help, but they also share a common bond with those they serve. This bond brings a sense of familiarity that enhances the help process. Our resident Call Center capability also gives the Marine Corps the flexibility to make outreach calls that target specific populations thought to be at higher risk for problems or requiring specific information. One example of this was our outreach to the Marines assigned to the Personnel Recovery Platoons whose mission is to recover the remains of fallen Marines and who have experienced the trauma of the battlefield to a degree and frequency that few others encounter. Additionally, we use our Call Center to keep wounded warrior Marines and families informed about benefits changes or other changes in laws or policies that will impact them. Now that the new Servicemembers' Traumatic Group Life Insurance policy changes have been implemented, we are using our Call Center to contact wounded and injured Marines and Marine Veterans to advise them of the enhanced benefits and relay to them the procedures for applying for the benefits. Our commitment to gaining and maintaining contact with all our wounded, ill, and injured Marines, including those that have returned to full duty, has prompted us to increase our Call Center capability by adding Call Centers at each of our Battalions located at Camp Lejeune, NC and Camp Pendleton, CA. "Once a Marine, Always a Marine" is not a recruiting slogan. It

is the philosophy that it is at the heart of our brotherhood and guides our efforts to care for wounded warriors.

It is this same philosophy that is behind our reinvigoration of the Marine For Life mission which assists the 27,000 Marines each year who leave active duty. This separate program falls under the Wounded Warrior Regiment and assists in the transition by connecting these Marines with “Marine friendly” employers and mentorship opportunities and providing educational assistance by utilizing Marine For Life HomeTown Links who are strategically located and working in communities throughout the United States.

The Wounded Warrior Regiment has made great strides in achieving a holistic approach to wounded warrior care. We are particularly dedicated to ensuring our Marines not only survive, but that they thrive – whether they return to duty or reintegrate to their communities. Supported by the passage of the Fiscal Year 2008 National Defense Authorization Act, the Marine Corps is aggressively moving forward in our efforts to institute improvements to the care, management, and transition of recovering Marines and their families. Recovery Care Coordinators have been hired, trained, and detailed to support our wounded, ill, and injured. Working with others currently providing care support and services they will oversee the development of a Comprehensive Recovery Plan for each wounded, ill, or injured Marine that will serve as their individual roadmap whether they are focused toward a return to duty status or separation and community reintegration. These caring and dedicated professionals monitor the execution of services across the continuum of care from recovery through rehabilitation to reintegration.

The network of support provided by the Wounded Warrior Regiment will continue to the Marine’s hometown via our District Injured Support Cells. Manned by active duty Marines,

these cells are established throughout the country to conduct face-to-face visits and telephone outreach to reserve and veteran, wounded, ill, and injured Marines. The Wounded Warrior Regiment will continue to develop those relationships that allow us to care for and advocate for our Marines and Marine Veterans. Our Nation has a reasonable expectation that her Marines will receive the care and support they need and deserve, whether this support is provided by the Marine Corps, the Department of Veterans Affairs, Veterans Service Organizations, or the many local and state governmental and non-governmental agencies.

As we continue to improve the care and management of our Nation's wounded, the Marine Corps is grateful to have the support of Congress. In addition to the support provided in the Fiscal Year 2009 National Defense Authorization Act, I would like to thank you for your personal visits to our Wounded Warriors in the hospital wards where they are recovering and on the bases where they live. The Marine Corps looks forward to continuing to work with Congress in ensuring that our wounded, ill and injured Marines receive the best care, resources, and opportunities possible.

X. Conclusion

As we continue to fight the Long War, the Marine Corps will be required to meet many commitments, both at home and abroad. While we have, to date, made impressive strides toward our Fiscal Year recruiting, retention, and end strength goals, we must remember that this is a Total Force effort. It is individual Marines who are our most precious asset, and we must continue to attract and retain the best and brightest into our ranks.

Marines are proud of what they do. They are proud of the "Eagle, Globe, and Anchor" and what it represents to our country. With your support, a vibrant Marine Corps will continue to meet our Nation's call. Thank you for the opportunity to present this testimony.

RECRUITING AND RETENTION

Mr. MURTHA. I just visited Fort Carson and Fort Benning, and I see a difference between what I am hearing here today and what I heard at those two bases. I met with 12 enlisted people at both bases. Their complaints were diverse, but, in a sense, it ends up by saying the people coming into the Army today are not meeting the standards they should meet, that the people coming into the Army today are less than the standards that we accept.

These are Non-Commissioned Officers (NCOs) that I met with. All of them have been deployed to Iraq or Afghanistan or both and they picked the people. They were concerned that the Army doesn't have the high school graduates you used to have; they didn't have the quality they used to have.

Now, I realize they have got a bigger problem in recruiting because they have a lot more people they have to recruit. Is this true of the Marine Corps?

General COLEMAN. No, sir, it is not.

A couple of things, sir. The DOD goal is 90 percent high school grad; Marine Corps is 96 percent high school grad. One A, the goal is 60 percent; we are at 66 percent. I will use a Colonel that just retired 2 months ago. He said he was a recruiter during the '80s, the '90s, and now 2000, over 30 years. The recruit today is as good, if not better, than any recruit he has ever recruited.

Mr. MURTHA. Navy?

Admiral FERGUSON. I would echo that our recruit quality is the finest that we have seen over my career, 94 to 95 percent high school grads, 74 percent upper middle group. We see extraordinary performance of these young people coming in.

Mr. MURTHA. The Army also had an Antideficiency Act violation, we feel, because they requested funds for personnel problems. They closed out the books last year and ended up without adequate funds available. Do you have that problem, either in the Navy or the Marine Corps?

Admiral FERGUSON. Regarding 2008, when the Secretary approved the end strength over execution for last year to meet the IA demand and fleet manning, we did a reprogramming, which was supported by the Congress, to cover those funds. So we did not have one in 2008. This year, we project that we will require additional funds to meet the manpower training requirements.

General COLEMAN. That is the same with us, sir. We would like to think that as we get up to 202,000 Marines, which we will get there this year, I believe, in the June–July time frame, we will do it well and with quality. But we will still need to shape this force. And then there are some facets, some Military Occupational Specialities (MOSs) that, no matter how much money we can raise or we can offer them, they won't take it, sir.

Mr. MURTHA. Well, I asked you before the hearing started, with no problem, basically no problems, why we are having a hearing? But it is—you said you are going to give us some good news. Well, that is good to hear some good news, because we have been getting so much bad news lately from the Army.

Mr. Frelinghuysen.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Admiral, Mr. Secretary, can we talk a little bit about the Navy's nuclear enterprise?

We had the Air Force in I think within the last couple of weeks, and in some ways we were disturbed by some of the things we heard but then encouraged by some of the steps that the Air Force has sort of taken to sort of correct some things.

In some of the reports we have read, there has been, obviously, mention of some of the Navy's involvement in the nuclear enterprise, which is of course a major responsibility. And there was some indication that perhaps there are some issues that you have. Can you talk to us a little bit about how focused you are? I mean, there are some manning issues that I think you pointed out in your testimony.

Admiral FERGUSON. From experience, I am a nuclear trained officer that came up through—interviewed with Admiral Rickover and came through the nuclear propulsion program.

The Navy has a very strong entrenched program of accountability, of oversight, and of supervision that is largely centered today within the submarine force as the keeper of the Trident deterrent. We looked very carefully at the Schlesinger Report and the other lessons. As you know, Admiral Donald did that review for the Air Force. We have gone back at the direction of the Secretary, looked at all our own practices; and, where necessary, we increased personnel that were available, both in the production and maintenance of the facilities, and looked at security. We feel very comfortable in our review of the focus of the supervision and of the governance.

The CNO appointed to the Director of the Navy staff, Vice Admiral Harvey, to head the Nuclear Weapons Council, which is comprised of three stars and those individuals that oversee this facility. So that, coupled with the oversight by Naval reactors and Admiral Donald, we feel like it has our focus and attention.

Mr. FRELINGHUYSEN. Well, on page 15 of your testimony, you speak about retention in the nuclear propulsion program. Correct me if I am wrong. Are you 922 Sailors short of your manning requirements across all zones? Is that accurate?

Admiral FERGUSON. That is correct. And those are primarily for manning on aircraft carriers and submarines involved in the operation of nuclear power plants, as opposed to the weapons enterprise, which is separate. So the way that we address that is through the enlistment bonuses, selective reenlistment bonuses, and increased recruiting. For next year, we have increased the number of operators that we will access initially by over 600. We feel that, even with those shortfalls, the ships are safe and operating correctly.

Mr. FRELINGHUYSEN. Your report says, and I quote, "We have met our submarine officer retention goals only once in 5 years, and we expect to fall 2 percent short of our target in fiscal year 2009."

Correct me if I am wrong. The submarine forces are currently at 452 officers short of requirements?

"Demand critical billets Navy-wide." End of quotation. Is that accurate?

Admiral FERGUSON. Yes, but that is spread across from ensign all the way up through captain, through all six pay grades in the

force. So we got support of the Congress last year to raise those bonuses for nuclear officers up to \$30,000 dollars a year, and so the issue with those officers is their high level of training. They are in great demand in the civilian sector, both in the conventional and nuclear industry, as well as in other engineering disciplines. We work very hard at retaining them and also giving them adequate compensation.

Mr. FRELINGHUYSEN. So you are addressing the challenge.

Admiral FERGUSON. Right.

Mr. FRELINGHUYSEN. And identifying more people that are capable.

Admiral FERGUSON. That is correct.

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

Mr. MURTHA. Mr. Moran.

BONUSES

Mr. MORAN. Thanks very much, Mr. Chairman.

Given the fact that the economy and the esprit de corps is working very well in the Marine Corps and Navy in terms of recruitment and retention, do you still need the bonuses?

Why don't you tell us, first of all, how much in the way of bonuses have been given out? And then I would like to know whether this should be an ongoing thing, or is it possible that we could cut back on the bonuses since it is questionable whether you need that additional incentive anymore?

General COLEMAN. Yes, sir. In fiscal year 2009, our retention bonus budget was \$400 million—401, and recruiting, \$61.6 million. We did a whale of a job with that, sir. As I said, we believe that we will be where we need to be this year numberwise but we will still need to shape the force. The amount of money that we will need in 2010, I would not hazard a guess. I would say that, yes, sir, we will still need bonuses. There are MOSs, such as explosive ordnance disposal, air crewmen on a C-130, and linguists that we are in steep competition with the civilian force, so we will need some bonuses.

Will we always need it to stay at the level we are at? Will that be able to drop? I would venture to say probably, sir, but I could not hazard a guess now on what we will need in 2010.

Mr. MORAN. So the bonuses are primarily used for the MOSs that are in particular demand, where the private sector is more competitive in terms of salary and competition.

General COLEMAN. I would say mostly. But there may not be call for a 0311 rifleman out in the civilian world, but we certainly need him in Afghanistan and Iraq, sir.

Mr. MORAN. You mentioned Afghanistan. Of the increase in deployment of 17,000, what portion are Marine Corps and Navy?

General COLEMAN. Marine Corps is about 10,000 of that sir.

Mr. MORAN. 10,000 of the 17,000?

General COLEMAN. Yes, sir.

Mr. MORAN. Are Marine Corps?

General COLEMAN. Yes, sir.

Admiral FERGUSON. I think the Navy's share—we haven't got the firm requirement request for forces—but is somewhere between 1,000 and 2,000.

Mr. MORAN. So you are talking as much as 12,000 out of 17,000 are non-Army personnel going into Afghanistan.

Admiral FERGUSON. That is our understanding.

Mr. MORAN. I didn't realize that.

Let me ask you about dealing with PTSD. You have done a much improved job, but I am told that Children's Hospital here in D.C. has had more than 1,000 children of veterans, recent combat personnel, admitted primarily for mental health problems. That is a very substantial number. Are you able to use any of that money that this Subcommittee has provided for the problems associated with the children of combat personnel?

Admiral FERGUSON. We instituted in 2008 a program run by the Bureau of Medicine, Families OverComing Under Stress. And we reach out to families in that program through the medical treatment centers. We also provide support through the family support centers and chaplains and those located on base, and family service centers, and we have improved those programs as well.

General COLEMAN. Sir, I would jump on that and concur with the Admiral. There are at least nine of our major bases the program that Admiral Ferguson is speaking to. So, yes, sir, we are reaching out. It is a holistic view of taking care of a family.

Congress was kind enough last year to give the Marine Corps quite a bit of money to take care of our families. We have spent the money wisely and taken care of our families because it is a holistic approach. A Marine joins the Marine Corps, but he or she only stays if the family is being taken care of and the family feels that they are a part of the Marine Corps, also, sir.

Mr. MORAN. Related to that, you have gotten the ratio of dwell time up to 1 to 1.2. But how much of that time generally is with family versus still away from family in training?

Admiral FERGUSON. Right. The Navy ratio is about 1 to 3, 1 to 2.8 for most units. We also levy the additional requirement is that when they are home they have to be not training or not underway for greater than 50 percent of the time. To break that limit, the CNO has to approve it. So our lowest limits in some of the high-stress units is about 53, 54 percent home.

General COLEMAN. Sir, we are not there yet. Our goal is when the unit—and most units are in their 1 to 1 or better. There are some actually less.

But you come home from a deployment and you get a 30-day block leave where there is no away-from-home time, as far as the Marine Corps is concerned. Prior to you deploying again, there is another 30-day block time. But before you deploy, actually leave CONUS to go, there is a 30-day block training at Mojave Viper out at Twentynine Palms, California. So we could not say to you that the dwell time when you are home for 7 months, that you are home for those 7 months. That would be an incorrect statement, sir.

Mr. MORAN. Let me ask one more question, if I could.

We have asked for the number of contractors. We got it from the Army, haven't gotten it from the Navy and Marine Corps. This goes to our Assistant Secretary here for Manpower. Are you working on that report, how many contractors you are relying upon?

Mr. BARNUM. I really can't say we are. Because those fundings come out of O&M, whereas we are dealing with the personnel end, so I would have to get back for the record on that.

Mr. MORAN. Okay. Well, we have been concerned about the integration of contract personnel, as you know, into what would normally be considered inherently military roles. So we are interested in that information.

[The information follows:]

In responding we assume that the question refers to the requirement for inventories and reviews of contracts for services set forth in Section 807 of the National Defense Authorization Act for Fiscal Year (FY) 2008, which amends Section 2330a of Title 10, U.S. Code. The Assistant Secretary of the Navy, Research, Development and Acquisition has assigned this task to the Deputy Assistant Secretary of the Navy for Acquisition and Logistics Management.

The Department of Defense is implementing Section 807 in phases with first submissions provided during FY 2008 by the Department of the Army. In accordance with Deputy Under Secretary of Defense (Acquisition and Technology) Memorandum dated May 16, 2008, the Department of the Navy (DoN) will deliver a prototype inventory list for review and approval in FY 2009. According to the current implementation schedule, this prototype inventory list will be submitted to the Office of the Secretary of Defense, Defense Procurement Acquisition Policy (DPAP) in June 2009 who will in turn formally submit the prototype list to Congress.

Mr. MURTHA. Mr. Bishop.

STOP LOSS AND INDIVIDUAL READY RESERVE

Mr. BISHOP. Thank you very much, gentlemen, and welcome to the Committee.

Let me just talk a little bit about personnel as it relates to stop loss and Individual Ready Reserve (IRR). As I understand it, the Marine Corps has not utilized stop/loss, really, since 2003. However, you have utilized the IRR significantly. I think you have got up to about 10,000 people or thereabouts in that category. Is that right?

General COLEMAN. IRR yes, sir. But you are speaking total, not involuntary? You are just speaking Ready Reserve, is that correct, sir?

Mr. BISHOP. Yes, Individual Ready Reserve, people who were discharged subject to being recalled in the IRR and who have been recalled who are now serving. And I am asking that you have allotted 2,500 to be activated at any one time. Is that right?

General COLEMAN. That is correct, sir.

Mr. BISHOP. And there have been two activations. How is that affecting your NCO ranks?

General COLEMAN. Yes, sir.

Mr. BISHOP. Because it is my understanding that you can get a marine private a lot quicker than you can the officers and the NCOs who have to supervise them.

General COLEMAN. That is correct, sir.

Of that number, to date, we have only involuntarily recalled 1,800. So there is a great difference between—

As you would note, sir, if I get out of the Marine Corps and my enlistment ends at the 4-year mark and I go into the IRR, but there is a war and the country calls and I raise my hand to go, then that is one thing. The harder part is when I don't raise my hand to go and you tell me, okay, come on, I need you anyway. So we have done some of both.

But the invol has only been about 1,800 and the Commandant has decided, on his own, that this 9 tech 2, this unit that is going to leave during May of this year, April-May this year to April-May of next year, is—we are taking 350 Involuntary Reserves, and that is the last time we are doing that.

Mr. BISHOP. What are the specialties of the involuntaries?

General COLEMAN. Sir, we need combat arms. All these folks will deploy. They will go to Iraq or Afghanistan. Nobody's going to stay back in Albany and do anything there. They will all deploy. But the specialties we are looking for, combat arms, motor T drivers, explosive ordnance, those—the critical MOSs that we need for the fight, sir.

Mr. BISHOP. Okay. What about the maintenance people?

General COLEMAN. Maintenance also, yes, sir.

Mr. BISHOP. So that would be somebody from Albany?

General COLEMAN. Yes, sir.

Mr. BISHOP. The logistics folks.

General COLEMAN. Yes, sir, and they are doing a whale of a job. Because, as you know, with General Williams down there even the active duty are being deployed. It is not often that we take Marines from supporting the establishment and pull them forward as we have in this long war, sir.

Mr. BISHOP. And you think this is going to be the last time.

General COLEMAN. This will be the last time. The Commandant has said this is the last time we will involuntary recall anyone.

Mr. BISHOP. From the IRR.

General COLEMAN. From the IRR, yes, sir.

Mr. BISHOP. Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Rogers.

RECRUITING

Mr. ROGERS. Thank you, Mr. Chairman. Welcome, gentlemen.

Let me ask each of you, what is the size of your recruiting force out there?

Admiral FERGUSON. I will take that.

I have about 3,800 recruiters in the field and about another 2,800 to 3,000 support personnel as classifiers and administrative support on top of that.

General COLEMAN. I will take that one for the record sir. I don't know.

Mr. ROGERS. Answer for the record then.

[The information follows:]

What is the size of the Marine Corps' recruiting force?

Currently, the Marine Corps Recruiting Command's total strength (comprised of Marines and Civilians) is 6,465, which includes 3,610 recruiters.

Mr. ROGERS. Do you know how many recruiting stations?

General COLEMAN. But every marine is a recruiter, sir.

Mr. ROGERS. All right. You have got a full house then. How many stations do you have?

Mr. MURTHA. Mr. Rogers, if you will yield, let me tell you a story about recruiting.

When I went in the Marine Corps, my mother cried, because I left college right in the middle of the Korean War. My second brother went to the Marine Corps; she cried. My third brother went

to the Marine Corps; she cried. When the fourth one was ready to go, she cried because she thought he was going to the Army.

She wrote to me. The Marine Corps put so much information out that you know you better go to the Marine Corps. And my dad was in the Army.

Mr. MORAN. And he said that in front of the Army General that was here.

Mr. ROGERS. How many recruiting stations do we have?

Admiral FERGUSON. Navy has approximately 1,400.

General COLEMAN. Sir, recruiting, I am not in charge of recruiting so that is another one I will take for the record, sir.

[The information follows:]

Please provide the number of Marine Corps Recruiting Stations.
The Marine corps has a total of 48 Recruiting Stations.

Mr. ROGERS. Have you noticed, and you may have answered this already, Have you noticed a change during these harder economic times in the ability to attract recruits?

Admiral FERGUSON. From our standpoint, the quality coming in through the door is higher, many with associate degrees and other advanced degrees. And we are using fewer waivers. Waivers are down about 18 percent this year within the Navy. So much higher quality, great willingness to serve, and less issues with waivers.

General COLEMAN. Sir, we were well on our way before the downturn, so at this point we have not noticed any noticeable difference in the number of recruits. We have not lowered our quality in any way, shape, or form, sir.

Mr. ROGERS. Do you co-locate recruiting stations between the services?

Admiral FERGUSON. Approximately 93 percent of our stations are co-located.

General COLEMAN. Yes, sir.

SUICIDE PREVENTION

Mr. ROGERS. One specific note of concern that I want to ask you about is suicide prevention. Have you been asked about this today already?

General COLEMAN. No, sir. Not yet today, no, sir.

Mr. ROGERS. I am told it is the second leading cause of death in the Marines. What can you tell us about the trends and the causes and what you are doing about it?

General COLEMAN. Sir, that is, as far as the Commandant is concerned, one of his biggest concerns. He charged the Assistant Commandant with having a standdown. So he brought all of his senior leaders to Quantico to discuss this.

We are tracking this. We are fully engaged. We have ordered the standdown during the month of March so that every Marine will receive suicide training during the month of March. That is the whole listing. And then at the junior level, because most of our suicides are in the very junior, 18 to 24 years old, 95 percent of them in that age group, so they are getting hands-on leadership in addition to what we have done.

Every commander from the O-6 level on has been charged with making a video that every recruit sees, or every Marine sees,

whether they have been in the command for 3 years or are just coming into the command. And we are also setting up a hot line so that folks can call. Ninety percent of the suicides in the Marine Corps have to do with a relationship that has gone south.

Mr. ROGERS. You mean with the spouse?

General COLEMAN. Female, male or that sort of—whether spouse, girlfriend, whatever. But the vast, vast majority have something to do with that.

Mr. MURTHA. Will the gentleman yield?

That doesn't mean the relationship wasn't caused because the guy was deployed or the man or woman was deployed?

General COLEMAN. Oh, no, sir, in no way shape or form. All I am saying is, most of our suicides, a bad relationship is what—

Mr. MURTHA. One of the things I found was, talking to the Army, some of the Army personnel said the spouses ought to have counseling, also. Because the problem is that they are away so long, they are young kids, and they can't handle the money. They get themselves into trouble.

So I mentioned this to the health people and said to them, you know, let's have some counseling for the family, in addition to calling the troops in and give them counseling before they go overseas.

General COLEMAN. Yes, sir. And I don't want to take up time, but if I could just say one thing. Every one is a bad one. But you scratch your head and you always say, what could I do differently?

I have been a commander a number of times. In the first command, we lost no Marines to suicide. The second command, we lost three. One was a young man that I knew from Jersey, and I was at Camp Lejeune, and he went home on a long weekend. Danny is his name. He came home after the long weekend.

Now, he had gone to college for a year and dropped out of college. And when he went home a year into it, he saw all his college buddies who had gone to college and ran track; and he was a track star. And he came back, and no one noticed that he was down. It was just that he came back. And it would be the same with me if I went home and then came back after a weekend or whatever, you are down.

Well, Danny went from North Carolina, from Camp Lejeune. He went down to Myrtle Beach, South Carolina, and checked into a hotel. Went to a store and got a bucket, a bag of sand, and a rope and went out into the pool, put the sand in the bucket, put it in the water, tied it to his leg and jumped in the water.

And you ask yourself, what could I have done differently?

So, I mean, we are all over this. No commander, from any branch of the service, wants to see that happen.

So we are doing everything we can, even involving the young Marines in staging. "Staging" is probably not the right word, but they put on a show that what it does to the family and your fellow Marines after you are gone. This is a tough one. And we are looking inside.

But you are right, sir. We have to educate the families also that they can see the signs.

And I apologize for taking up all that time, sir.

Mr. ROGERS. Would you like to respond?

Admiral FERGUSON. We, also, like the Marine Corps, consider this a primary responsibility of the chain of command. And we have introduced several programs on operational stress control. Our data for the year is about 11.6 per 100,000, well below the normalized rate. But each one is a tragedy.

So we are seeing, similar to what Mr. Murtha indicated, is the first indicators are often the family. And we are getting warnings through the family support centers, through the chaplains, and through these other warning indicators; and we are going after them aggressively and supporting the families.

Mr. ROGERS. And, lastly, have you noticed whether or not the suicides are more prevalent amongst personnel who have been deployed recently or are on deployment, as opposed to—

Admiral FERGUSON. Within the Navy, our data shows that, of those who committed suicide, less than half had deployed in the previous 3 years. So we don't see a correlation between deployments. We see that it is generally males, 25 to 35, with a failed relationship or depression, and some familiarity with a weapon are the primary causal factors.

Mr. BARNUM. The Marine Corps numbers, sir, for 2003 to 2008, 16 percent committed suicide in country, in Iraq or Afghanistan, 32 percent after they were deployed, and 52 percent had no deployment history.

Mr. ROGERS. Thank you.

Mr. MURTHA. Ms. Kilpatrick.

HEALTH AND WELLNESS

Ms. KILPATRICK. I am stunned. Thank you, Mr. Chairman.

First of all, I want to commend each of you for your service. Medal of Honor, sir, Captain, thank you so much for the work that you have done for our country. General Coleman, as well, all of your history and all of that; as well as you, Admiral. You all bring years of experience and dedication to our country, and I just want to say thank you for that.

I was going to do suicides, but I am not touching that.

Multiple deployments—and suicides are up everywhere. And I don't know if we looked at World War II or Vietnam or Korea, if we found deployment had any effect on suicides. But I guess they have. I would sit here and think that the time of war—and I know one thing I have found, too, after visiting some time ago, just recently, I should say, up in Congressman—Chairman Dicks' district on a Trident submarine for the first time. Admiral, I have read about them a long time, finally looked into that scope, got a picture for my dad who is a Navy man. Just all that you go through.

One thing they told us on this Committee—and I have seen it even now, having gone on an aircraft carrier and submarines—is that the young men and women, Sailors, Marines, Airmen, Soldiers, the like, they are dedicated. I served on one of the academy boards, and that is what I found, the dedication from the young people—and they're children. I am a grandmother, so they're children.

I find in our testimony that we have seen recently that, in addition to academics, healthiness or not is probably the next most critical thing that you all face as you talk to your recruits. And I am

leaving suicide. But what about the health and wellness and the other thing with health care in the military lacking in terms of physicians? We have heard testimony on that as well. You may find it. You don't have to go there. The nutrition part of what they are, who they are, if they can maintain themselves. How much does that play into getting on those narrow ladders in the Trident and being effective in their daily responsibilities and whether or not they are depressed by that?

I am trying to find out, not being a psychologist or any of that, but a grandmother, what is causing this. If it is not the deployment, and most people who have sat there have said that it is not, that it is other things. They are young, for one thing. Can you shed some light on that at all, either of you?

General COLEMAN. Ma'am, I would just go back to the failed relationships. And I guess, you know, peer pressure now is nothing like when I was growing up. The stats for the Marine Corps say they are young, they are white, they are in a failed relationship, and I would even have thought that maybe, maybe alcohol was in it. But it is not, There is nothing that says there was a—you know, somebody was sitting around, and they are drinking too much. It is usually a failed relationship.

And, again, as the Secretary said, it is not the deployments. I think it is the stress because—

Ms. KILPATRICK. People don't kill themselves in bad relationships when they are out. I guess they do. Some do.

General COLEMAN. They do. But there is stress when I deploy. But because I deploy, there is stress on the folks back home, whether at home or at the unit, because now there is more work for the folks back there. So it is a stressful all over.

But I wish we could go, you know, pick up a book and say, this is it, and go attack it.

Ms. KILPATRICK. Admiral.

Admiral FERGUSON. I would offer that when we looked and analyzed our data for those who had deployed and then committed suicide subsequently, it occurred normally within the first 6 months after their return. So we found that the camaraderie, the leadership, and the common purpose of a deployment and that unit cohesiveness sustained those individuals. And then when they returned and had the relationship fail or had an issue, that is what set these tragic chain of events in motion.

So we focused a lot on resiliency and building resiliency, both through physical training, mental health, and counseling and support; and I think that is the key component in building this in the young people who are going through this stressful period.

Ms. KILPATRICK. So then does our health care system—have we adequately taken care of what your needs are, both for the enlisted as well as for their families? Is there some area we need to be beefing up or doing something different with?

General COLEMAN. Let me read this, ma'am, and maybe this will help us:

The key risk factors and associated suppressors, most common key risk factors reported suicides from 1999 to 2007. Depression, 34 percent; psychiatric history, 29 percent; anxiety, 23 percent;

sense of failure, 20 percent; change in usual mood—that is what the Admiral was talking about—20 percent.

So I just don't know if we have the number—I don't know that we have the number of medical folks that could cover all that, and I don't know that that is possible.

Admiral FERGUSON. I would say that an increase in the number of mental health professionals in the medical community would be appreciated and useful in combating this within the service.

Mr. MURTHA. Let me answer for you folks.

We have been working closely, as you know, with the mental health, with the health system as a whole, and this committee has probably done more than any committee in the Congress making sure you had what you needed to take care of health care.

I meet continuously with Mrs. Emery and Dr. Gassels on this problem, suicide, and all these other problems that they have. We have put in place a plan where they have a case worker and they can hire psychologists.

Now, we have a shortage of psychologists and psychiatrists all over the country, so no matter how much money we put in, we can't find enough people and we don't know exact causes.

I had an incident. Not long ago, I visited one of the bases. The base commander's son was killed in Iraq. His other son committed suicide. His wife and he were devastated by this. They don't know why. He was ready to be commissioned. He would have been deployed.

And suicide is just part of it. Because we know that we are going to have 300,000 people with PTSD, and we know the sooner we get them the better off we will be. So we are putting every bit of money, because of you, because of this committee, into health care that they can accumulate or that they can use in order to help solve this problem.

Suicide, divorce rates are up in the Marine Corps and the Army because of these long deployments; and 15-month deployments are devastating to these troops. And the Marine Corps, as General Coleman said, even though they are home, they are not home. Because they go to schools, they go to training, and they go back over before their time is up. So it is a complicated problem.

We are doing everything we can to make sure that—for instance, stop loss. The Secretary made the announcement the other day. He said, we are going to take care of stop loss. He didn't take care of stop loss. This committee took care of stop loss. We put the money in for stop loss, and we are going to put money in for stop loss, if everybody agrees to it for the whole—everybody who was in stop loss. I mean, 160,000 were stop loss. We are going to put the money in.

And the services, some of the services argued that they didn't think it was right. Well, hell, you keep a guy 7 months past his deployment or past his enlistment, he ought to be given reimbursement for that. And I think this subcommittee will agree with me when we go to do that.

But this is a major problem, this health care situation. So I appreciate Ms. Kilpatrick. This committee has been at the forefront of this issue, Bill Young, myself, and all the rest of the committee,

a lot of suggestions, a lot of recommendations, and we have tried to follow all of them.

Mr. BARNUM. Mr. Chairman, we sincerely appreciate all the committee has done over the past years. And I think we are leaning forward in the saddle, and we are confronting the issues. As General Coleman just said, we wish we could turn the page of the book and all the answers would be there.

But I think that BUMED has taken the lead on many of these. We have got a study going on with UCLA now on resiliency within the family and other programs, and we are hiring professionals to go into units. So I think we have identified the problem and we are attacking it.

Mr. MURTHA. Mr. Bishop, did you have a question on this?

DEPRESSION

Mr. BISHOP. Yes, sir. I just wanted to weigh in.

I was listening to the statistics—you said depression, sense of failure, anxiety, failure of relationships. Those are more or less the symptoms, as opposed to necessarily the problem. The question is, why are they depressed? Why do they have a sense of failure? Why is there anxiety? And which results in the family rise of divorce?

I would think that you have got adultery, you have got the strain on the relationship when you have got these extended deployments. Once that happens, you have got young people, you know, under 35 years old that may not have the experience and the maturity to be able to handle those kind of disappointments. They come back, and they have got a child that wasn't theirs. They come back, and they find out that the guy down the street was dating their wife, or something of that order. And those kinds of stresses lead to the sense of failure.

I am a failure as a husband. Boom, I blow my brains out. I am depressed because my buddy has now been with my wife, and everybody on the post knows it.

Those are the kinds of—problems that are a result of the multiple deployments which is hidden when you just say that the source, the causes of the suicide is depression, sense of failure, anxiety or failure of a relationship. Why does the relationship fail? And the strain and the not-sufficient dwell time to reinforce these relationships is what is driving that stress and that suicide rate.

Mr. MURTHA. Mr. Kingston.

CHANGING NAME OF THE DEPARTMENT OF THE NAVY

Mr. KINGSTON. Thank you, Mr. Chairman.

I wanted to ask a question about this bill that has been offered by Walter Jones that changes the name of the Department of the Navy and Marine Corps. Do you guys have any opinion? Do you hear anybody talking about that might be a more diplomatic way? Not necessarily your own opinion, but what kind of opinions do you hear? The Chairman has already said he is amending it to change the wording around.

Mr. BARNUM. I think my opinion would be interesting but irrelevant right now.

I have talked to Congressman Jones; and, of course, having earned the title of Marine, as the Chairman has, there is an emo-

tional aspect and there is a reality aspect. It is not going to change, my opinion, the authority of the Secretary of the Navy. I think it has brought on a lot of levity to some times when there was tension in the room. But I think we have more important things on the table to accomplish than changing the name of the Navy to the Navy and the Marine Corps.

Mr. KINGSTON. I just think about the Army several years ago deciding that the Rangers couldn't have the black beret, that everybody had to have the same color beret. So we are known to do things like this.

Mr. BARNUM. Well, every false step is a learning experience. We shouldn't make that mistake.

TRAINING

Mr. KINGSTON. My question is, in terms of the training for Afghanistan, you have got 17,000 Marines going there. How is the training? Are you able to train on the equipment that you will be using?

General COLEMAN. We will train on like equipment. It will not be necessarily the item that you have when you go to Mojave Viper, which is at Twentynine Palms, California. It may not be that same item, but it will be a like item that will, in most cases, will already be there or you will take from your home base.

Mr. KINGSTON. Are you familiar with the firearms training system that they have in the Army? I don't know if the Marines have it or not. I know a lot of Guard units have it in the Army and then the regular Army has it.

Mr. BARNUM. You are talking about the FAST system, which is a simulator?

Mr. KINGSTON. Yes.

Mr. BARNUM. Yes.

Mr. KINGSTON. Are you training on that through the Marines?

Mr. BARNUM. We have some Reserve units that have utilized that system while they were at Twentynine Palms.

Mr. KINGSTON. It saves money, but it is also basically the real weapon itself and very close to lifelike, is that correct?

Mr. BARNUM. That is very true, and I think that you are going to see a lot of that used in our military police units that are scattered around. And it is a good system, and we are using it with some deployed units. But the Army and the Coast Guard, as you probably know, are the biggest users, as I remember that system.

Mr. KINGSTON. Is there anything we need to know in terms of training the Marines? Is there anything you do not have that we need to be aware of?

General COLEMAN. I think that Congress as a whole and this committee specifically has done volumes for us. I would ask that we slowly proceed in any drawdown and retention bonuses. That would be my fear, is where do we go? And it is not that Marines feel that they, okay, this is something that they will always have. But in the near term, until we get right-sized and structured correctly, that would be my fear, is that we would do that. Along with, as Ms. Kilpatrick said, the health of our people is our biggest concern. So if we can get what we need for the medical side, that would be my desire, sir.

Mr. KINGSTON. In terms of the physical conditioning, is it just as tough as it has always been? Or we had some NCOs tell some folks on a codel that they did not think that the newer Soldiers, talking about the Army Soldiers, were as physically up to speed as they needed to be. Are you seeing that in the Navy or in the Marines?

Admiral FERGUSON. We run a physical fitness test twice a year. That is standard, has not changed within the Navy. What we are seeing is probably more of a national issue of the ones coming out of high school in the recruiting station. About 50 percent fail the physical test the first time they take it. We put them on a remedial program and work with them such that after they finish basic military training less than one-half of 1 percent have a problem with failure. So we are very comfortable with the physical standards and how they are performing.

General COLEMAN. We train them like we always have, sir, hard.

Mr. KINGSTON. I thank you.

Thank you, Mr. Chairman.

Mr. MURTHA. Well, we appreciate your coming before the Committee. To my knowledge, we have only had one other Congressional Medal of Honor winner before the committee, and that was the guy that took MacArthur out of Corregidor. Buckley was his name I think, if I remember. He was the IG for a number of years, and they kept him on long past his retirement age. And so we are honored to have all three of you, but especially yourself, Mr. Secretary.

Mr. BARNUM. Well, thank you very much. It has been an honor to testify. I have got to do a lot of things in my life, and this is a first. So thank you very much.

And I appreciate, I really do, on behalf of the Sailors and Marines that the three of us represent, we really appreciate the efforts of this committee. You talk the talk, and you walk the walk. We are very appreciative. Thank you.

Mr. MURTHA. The Committee will adjourn till next week.

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

INDIVIDUAL AUGMENTATION (IA) REQUIREMENTS

Question. Since September 11, 2001, 76,000 Sailors have served on IA tours. In IA assignments Navy Sailors are in some cases filling in for Army and Marine Corps personnel. These assignments can be outside a Sailor's typical occupational experience and range from detainee operations to counter-improvised explosive devices operations. The Navy currently has 10,935 IAs and of the, 6,069 IAs are in Iraq and Afghanistan. Of the 6,069 IAs approximately 2,059 are noncore requirements. The Navy currently pays the cost of IAs from the base budget and has requested to fund this cost out of the FY2009 supplemental.

Admiral Ferguson, please explain the IA process. Do sailors volunteer for IA billets or are they involuntarily placed in IA billets?

Answer. Combatant Commanders (COCOMs) identify requirements, which are forwarded to the Joint Staff for validation. Following validation of a Request for Forces (RFF) and Joint Manning Documents (JMDs), the requirements are sent to Joint Forces Command (JFCOM) for Service review and sourcing. Navy reviews requirements based on our capability and capacity to fill them, across both active and reserve components. Upon completion of our review a sourcing recommendation is forwarded to JFCOM and the Joint Staff and, when ordered by the Secretary of Defense, is released for execution.

Navy uses two approaches in sourcing Combatant Commander requirements: GWOT Support Assignment (GSA) and Individual Augmentee Manpower Management (IAMM). In the GSA process, orders are issued in conjunction with a perma-

ment change of station; thereby minimizing disruption in the lives of Sailors and their families by completion of an IA as part of the normal reassignment process. New and unstable requirements in support of overseas contingency operations, which cannot be accomplished through the GSA process, may be fulfilled by active or reserve component personnel through the legacy IA process, known as IAMM, which can occur during the course of a Sailors current assignment. Support for Sailors continues throughout their deployment (First I-stop, training and arrival in theater) and redeployment.

IA billets are filled through both voluntary and involuntary assignments. By volunteering, Sailors are able to exercise greater influence over the timing and specific billet to which they may be assigned. Involuntary assignments are used to fill IAs for which no volunteer is identified. To the maximum extent possible, we attempt to use the less disruptive GSA approach to fill both voluntary and involuntary IA assignments. The predictability of the GSA process incentivizes volunteerism by affording Sailors the opportunity to work an IA into a normal career progression.

Question. Are sailors ever taken mid-tour and placed in IA billets?

Answer. To the maximum extent possible, we fill IA assignments through the GSA process. However, emerging demands dictate filling an IA requirement through a mid-tour IAMM assignment. The current split is approximately 41% IA/GSA, and 59% IAMM.

Question. How long does the typical IA assignment last?

Answer. Typically, an IA assignment runs from 210 days to 365 days in country, frequently referred to as “boots on the ground” depending on type of mission. This timeframe does not include pre-deployment training.

Question. Admiral Ferguson, some IA billets are outside a Sailor’s typical occupational experience. What are some examples of these IA billets?

Answer. Approximately 4,440 Sailors are serving as IAs supporting “temporary” missions. These are capabilities for which Navy does not have a standard military force employment package. Examples include Civil Affairs, Provincial Reconstruction Teams (PRTs), and Detainee Operations. Approximately 2,700 Sailors are serving as IAs supporting “adaptive core” missions. These are capabilities for which a service can expand a core capability to perform with additional training and equipping. Examples include Counter-IED operations, Military Police, and Base Operations.

Questions. Since these IA billets are outside the Navy’s core mission, please explain how Sailors are trained for these billets?

Answer. Training is coordinated by US Fleet Forces Command through Joint Forces Command and Army, to provide mission specific training conducted by Army at various training sites that meet Central Command standards. For example, Civil Affairs and PRT training is conducted at Ft Bragg and Detainee Operations can be conducted at Ft Lewis, Washington and Ft Dix.

Question. Admiral Ferguson, what IA billets line up with the Navy’s core mission and how are they filled?

Answer. Approximately 7,000 Sailors are serving as IAs in support of “core” missions. Core missions are capabilities for which the service is uniquely responsible (Title 10) and has a standard, mission-ready, capable military force employment package. Examples include construction (Seabees), airlift support, cargo handling, maritime and port security, and medical/Marine Corps support.

Question. Does the Navy fill core IA billets first, then noncore IA billets or vice versa?

Answer. Navy does not source IA billets based on whether they are core or non-core, rather sources augmentation requirements based on Joint Staff guidance, typically as Combatant Commander demand is reviewed and approved by Joint Staff. The Services source these as they occur based on capability and capacity.

Question. Admiral Ferguson, is the Navy experiencing any problems filling these IA missions?

Answer. Currently, we are meeting 100% of our IA missions with qualified Sailors while sustaining appropriate dwell time. Growth in certain critical skill sets demands specialties such as Intel, Supply, Explosive Ordnance Disposal, Engineer and certain Medical Professions, which may present increased challenges in meeting the demand without a reduction in dwell time for our Sailors.

Question. Mr. Barnum, are any of the IA billets being assimilated into the Navy’s Core mission?

Answer. Navy is not growing any new mission areas due to demand. For example, Navy is not building Detainee Companies, Embedded Training Teams or PRTs as part of its Core Mission. Additionally, Navy uses existing skill sets with additional training that support Adaptive Core Mission areas. The Department has agreed to

fund some skill sets that support Adaptive Core requirements and will support traditional Navy missions.

Question. If so, how many were once performed by the Army and Marine Corps?

Answer. Not applicable

Question. Mr. Barnum, are there any new missions and requirements that the Navy may take on in the future?

Answer. Navy's stabilization strategy is directed at sustaining a high quality force to meet the demands of the Maritime Strategy and the joint warfighter, while at the same time being able to respond to new mission areas. New and expanded mission areas include riverine warfare, cyber and missile defense, and SEAL/SOF (intelligence, naval coastal warfare, UAV, submarine operations).

Question. Mr. Barnum, how many sailors are currently deployed in the Central Command Area of Responsibility and of that how many are used for IA missions?

Answer. As of 16 March, there were a total ~23,800 Sailors deployed in the CENTCOM AOR. Of those, ~14,400 are ashore and ~9,400 afloat. The forces ashore include ~8,200 augmentees sourced with a mix of Active and Reserve personnel.

Question. Admiral Ferguson, what was the overall scope of the Navy's IA billet responsibilities over the last several years to the present?

Answer. We have experienced growth over the past two and half years. In August of 2006 there were ~9,500 augmentation requirements. This has increased to ~11,000 requirements in April 2009. Navy expects these requirements to increase supporting operations in Afghanistan, for additional ~1,600 from its current level. This includes current and expected support to Marine Corps units. Navy's contribution will remain steady provided no new growth is requested. Additionally, Navy contribution in Iraq is aligned to Battlespace (Counter-Rocket, Artillery, and Mortar/Base Operations/Navy Mobile Construction Battalions) and Specific Mission areas (Detainee Operations). As missions are returned to the Iraqis and Central Command reduces its footprint, then Navy may see a reduction.

NAVY END STRENGTH

Question. Admiral Ferguson, given that the Navy IA billet demand appears to only be increasing, what does the Navy expect its future end strength to be (active duty, guard, and reserve numbers)?

Answer. I expect to finish FY09 at an end strength level of approximately 331,000. At this point in the FY10 budget build, I expect to need fewer Sailors next year, but that number is contingent on pending decisions. On the reserve side, I expect to finish FY09 around 66,700 end strength. FY10 reserve requirements are likely to be less, although they are also contingent on pending decisions.

Question. Admiral Ferguson, please explain how "sailor behavior" is driving this over strength and what actions you are taking to get to the planned fiscal year 2009 end strength?

Answer. We are experiencing increased retention and reduced attrition behaviors likely attributable to the economy. This is resulting in greater than planned for end-strength.

To meet Combatant Commander Individual Augmentation demand and reduce stress on the force, the Secretary of the Navy approved a fiscal year 2009 end strength level two percent above our current authorization. While this action was operationally driven, it will allow us to remain within Secretary of the Navy approved end strength levels.

To maintain a balanced force in terms of seniority, experience, and skills, we have implemented a comprehensive force stabilization strategy. We have also implemented, or will implement, a number of force shaping measures, including: time in grade waivers, reducing or eliminating selective reenlistment bonuses, performance-based continuation boards for enlisted personnel with greater than 20 years of service, Perform to Serve and voluntary early separations.

Question. Admiral Ferguson, what is the additional cost of this over strength?

Answer. The total cost due to over strength is \$952M.

MARINE CORPS END STRENGTH

Question. General Coleman, adding more enlisted Marines means adding more officers to lead them, but growing officers remains a struggle because of the time it takes to train an officer. What steps are the Marine Corps taking to match the officer side of growth to enlisted side?

Answer. The Marine Corps increased both input and throughput for our officers, specifically:

- Increased its share of graduates from the Naval Academy and NROTC

- Lifted caps on, and encouraged the participation in, the enlisted-to-officer programs.
- Provided for incentives to encourage officer accessions through the College Loan Repayment Program and the Officer Accession Incentive (FY09 initiative).
- Increased staffing and billeting space at officer training venues to increase through-put thus reducing time-to-train (OCS, TBS, and MOS schools).

Question. When do you think that the Marine Corps will reach the correct ratio of officers to enlisted?

Answer. The Marine Corps expects to have the necessary officer-to-enlisted ratio by the end of FY 2010.

NAVY RECRUITING AND RETENTION

Question. Admiral Ferguson, since the Navy is doing well in both the retention and recruiting side, what force shaping measures will the Navy use to get the “right mix” of personnel it needs?

Answer. Navy will continue to focus on performance while maintaining a balance between seniority, experience, and skills. To do this, we have instituted a number of measures on the enlisted side including adjusting reenlistment bonuses, incorporating “Perform to Serve” through 14 years of service, allowing time-in-grade waivers for retirement, and implementing a continuation board for E7–E9 with over 20 years of service. On the officer side, we will use a probationary officer review board intended to identify the highest performing officers for retention, we are similarly allowing waivers of active duty minimum service requirement, in targeted communities, to permit officers who will otherwise separate upon completing their service obligation, to depart the Navy up to one year early.

In addition, we are adjusting our reenlistment bonuses to retain our best Sailors with critical skills. We also have focused our recruiting efforts on matching individuals to critical ratings.

Question. Admiral Ferguson, since you are doing so well with retaining and recruiting sailors, will this help ease the burden of IA billets?

Answer. Yes; the success we have experienced with recruiting and retaining high-quality Sailors will enable us to better fill our IA requirements and meet Fleet manning requirements.

Question. Admiral Ferguson, has the Navy instituted any retraining efforts for officers and enlisted, targeting career fields with overages and shifting them into career fields with identified shortages? If so, please explain how the Navy chooses the personnel to retrain, and the average cost to the Navy to retrain these sailors.

Answer. Navy active and reserve components have existing programs and processes designed for targeting and retraining enlisted Sailors from overmanned to undermanned skill sets. Enlisted Sailors in overmanned ratings are initially identified during Career Development Boards. These sailors are encouraged to consider a conversion to an undermanned rating for which they are fully qualified. Additionally, the Perform to Serve (PTS) process requires all Sailors with less than 14 years of service to request reenlistment approval in their current rating or to convert to undermanned ratings based on the needs of the Navy. To achieve proper manning levels with Sailors possessing the appropriate skill sets, bonuses are paid to those who qualify for, and agree to convert to, ratings with identified shortages. Some ratings require traditional classroom training, while others can be accomplished through on-the-job training.

Currently no officer designators are overmanned such that redesignation is required. However, through the lateral transfer/force shaping process, opportunities exist for redesignation and retraining. Additionally, individuals who do not make it through initial training pipelines may apply to redesignate to another, undermanned, community. If accepted they will be retrained in that community.

Both active and reserve components have tools available to educate members of the enlisted and officer communities to become familiar with other career fields (training requirements, occupational details, sea/shore rotations, and geographic demand). Opportunities exist for Sailors in overmanned ratings/designators to retrain into undermanned ratings/designators as they transition between Navy components.

Costs associated with retraining and redesignating Sailors are negligible, since personnel are assigned to available training seats previously budgeted as part of the annual training plan.

Question. Admiral Ferguson, since retention is at an all time high and recruiting is doing very well, are critical career fields having an easier time being filled? If not, why, and what efforts are being taken to fill shortages?

Answer. Navy continues to experience sustained recruiting success, increased retention, and reduced attrition. While enlisted active and reserve recruiting goals

have been met for 23 straight months through March 2009, this fiscal year is marked by higher retention and lower attrition than predicted due to pressure from the current national economy.

This fiscal year, Navy has been successful recruiting critical skills. As of April 20, we have recruited greater than 93 percent of the requirement for Nuclear Field enlisted recruits, SEALs, Special Warfare Combat Crewman, Navy Divers, Explosive Ordnance Disposal Technicians, and Enlisted Aircrew. Two ratings we continue to focus on are Cryptologic Technician Interpretive (CTI) at 77.6 percent and Enlisted Aircrew Rescue Swimmers (AIRR) at 55.5 percent. CTI is one of very few ratings still available for a retention bonus and, combined with a \$20K enlistment bonus, the fill rate is increasing. We are attempting to get healthy in the AIRR rating through the combination of a \$25K enlistment bonus and filling with recruits who are unable to complete SEAL training, by reclassifying these individuals as Rescue Swimmers.

The positive retention environment Navy has experienced this year is reflected across the majority of critical skills including Special Operations, EOD, Divers, Missile Technicians, and CTIs. Strength increases based upon new mission requirements require Special Warfare Boat Operator and Computer Network Technician retention over execution to achieve force requirements. Nuclear operators, dental and medical officers, and Independent Duty Corpsman remain a focus as competition from the civilian sector and high operational tempo continue to challenge retention in these fields. Given the change in retention and loss behavior, we are focused on stabilizing the force through a targeted investment approach—reducing or eliminating monetary incentives where they are not needed and through continued investment in critical skills.

Question. Mr. Barnum, has the Navy analyzed why critical-mission military 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, Navy has conducted such analysis.

Unprecedented recruiting success, coupled with historic retention rates and low attrition, continues to strengthen the health of critical-mission ratings. As the Global War on Terrorism took shape, Navy developed strategies to grow in some of the mission-critical ratings.

Navy developed a multi-pronged approach to growing in mission-critical ratings. We expanded Navy Recruiting efforts through dedication of manpower, increased enlistment bonuses and focused recruiting programs; we conducted in-depth training pipeline analyses to identify efficiency gains; and we focused retention bonuses to ensure community health and retained growth. Since many mission-critical ratings are in demand by the civilian economy, it is vital that we maintain specific enlistment and retention bonuses, and continue with plans to expand training throughout.

Operational impact upon critical skill shortages creates considerable stress on the force in terms of additional deployments and “away-from-home” time, impacting the Sailors and their families, and ultimately community health and retention. The SEAL officer community, for example, is the cohort arguable experiencing the greatest OPTEMPO in terms of combat deployments: an average of four combat deployments per Officer. It is currently 68 percent manned and is still in a DOD-directed growth phase. Consequently, it is easy to see how the loss of just one SEAL significantly impacts the community’s long-term health. Forward-deployed operational jobs are considered the most critical fills; where shortages occur, the CONUS-based, non-deployable jobs go unfilled, introduced shortfalls in the training commands (and staffs) which directly impacts the readiness of the Force.

Question. Mr. Barnum, 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 details on recruiting and retention by military occupational specialty (MOS).

Answer. Please see the attached regarding the details on recruiting and retention for enlisted and officer communities in the Navy.

Navy recruiting continues to do well for both enlisted and officer communities. We do have certain specialties that continually require attention, especially the officer and enlisted nuclear fields and healthy profession officers.

For enlisted, retention is broken down into zones and is calculated by the number of individuals who have re-listed and are currently on active duty in the particular zone. The three zones Navy is most concerned about are Zones A, B, and C. Zone A is 0–6 years on active duty, Zone B is 6–10 years, and Zone C is 10–14 years.

For officers, retention is community specific since each community has specific milestones an officer is required to meet.

Enlisted recruiting and retention table by rating (MOS) is below. Several highlighted yellow ratings are being monitored closely for recruiting and retention behavior. Navy has restructured enlistment bonuses and other efforts on our remaining targets and expects to meet all end of year enlisted recruiting goals. Also highlighted are enlisted ratings and zones where Navy is below year to date goals. Navy continues to closely monitor behavior and economic impact to ratings and is ready to provide stimulus where needed to obtain end of year enlisted retention goals.

Rating	Rating Proper Name	Recruiting Fiscal Year To Date (FYTD) March 2009		Reenlistment Rate FYTD 2009			
		Total FY Goal	Total FY Recruit to Date	FY % RTD	Zone A (Goal = 54%)	Zone B (Goal = 63%)	Zone C (Goal = 81%)
ABE	Aviation Boatswain's Mate-Launch/Recovery	290	292	100.7%	57.5%	78.3%	86.7%
ABF	Aviation Boatswain's Mate-Fuels	230	229	99.6%	47.1%	67.3%	81.0%
ABH	Aviation Boatswain's Mate-Aircraft Handling	471	470	99.8%	58.7%	65.7%	91.1%
AC	Air Traffic Controller	331	348	105.1%	70.9%	70.3%	66.7%
AD	Aviation Machinist's Mate	584	537	92.0%	50.7%	62.1%	93.1%
AE	Aviation Electrician's Mate	1554	1517	97.6%	59.5%	58.3%	70.9%
AG	Aerographer's Mate	133	146	109.8%	29.3%	69.2%	87.0%
AM	Aviation Structural Mechanic	795	735	92.5%	70.5%	62.1%	81.1%
AME	Aviation Structural Mechanic-Safety Equipment	126	143	113.5%	53.1%	58.3%	81.0%
AO	Aviation Ordnanceman	1246	1261	101.2%	60.4%	78.1%	86.2%
AS	Aviation Support Equipment Technician	190	204	107.4%	54.0%	72.2%	95.5%
AT	Aviation Electronics Technician	Recruited as AV, see AE #s		54.1%	56.8%	78.1%	
AZ	Aviation Maintenance Administrationman	199	219	110.1%	58.6%	58.2%	81.8%
BM	Boatswain's Mate	449	592	131.8%	51.5%	75.3%	91.6%
BU	Builder	281	298	106.0%	68.4%	61.3%	77.4%
CE	Construction Electrician	132	130	98.5%	72.4%	82.9%	85.7%
CM	Construction Mechanic	209	204	97.6%	83.8%	88.2%	84.2%
CS	Culinary Specialist	772	843	109.2%	73.2%	73.1%	92.5%
CS(SS)	Culinary Specialist, Submarine	119	130	109.2%	84.2%	92.0%	88.9%
CTI	Cryptologic Technician (Interpretive)	438	267	61.0%	72.9%	68.1%	70.0%

Rating	Rating Proper Name	Recruiting Fiscal Year To Date (FYTD) March 2009			Recruitment Rate FYTD 2009		
		Total FY Goal	Total FY Recruit to Date	FY % RTD	Zone A (Goal = 54%)	Zone B (Goal = 63%)	Zone C (Goal = 81%)
CTM	Cryptologic Technician (Maintenance)	100	107	107.0%	61.7%	67.9%	94.7%
CTN	Cryptologic Technician (Networks)	139	167	120.1%	93.1%	69.8%	80.6%
CTR	Cryptologic Technician (Collection)	431	462	107.2%	67.6%	76.8%	80.0%
CTT	Cryptologic Technician (Technician)	430	424	98.6%	58.8%	76.6%	89.7%
DC	Damage Controlman	223	239	107.2%	44.6%	71.9%	88.2%
EA	Engineering Aid	18	20	111.1%	66.7%	90.0%	80.0%
ELT_NUC_SS	Engineering Lab Technician, Nuclear, Submarine	Recruited as NUC, see EM_NUC_SS #s			51.3%	47.7%	64.8%
ELT_NUC_SW	Engineering Lab Technician, Nuclear, Surface	Recruited as NUC, see EM_NUC_SS #s			45.5%	41.9%	59.7%
EM	Electrician's Mate, Surface Warfare	487	519	106.6%	36.7%	51.5%	87.5%
EM_NUC_SS	Electrician's Mate, Nuclear Power, Submarine	2604	2616	100.5%	49.7%	43.7%	65.0%
EM_NUC_SW	Electrician's Mate, Nuclear Power, Surface Warfare	Recruited as NUC, see EM_NUC_SS #s			40.8%	40.8%	68.8%
EN	Engineman	398	418	105.0%	34.8%	69.8%	84.1%
EO	Equipment Operator	209	207	99.0%	76.6%	80.4%	90.5%
EOD	Explosive Ordnance Disposal	255	259	101.6%	80.6%	89.2%	90.0%
ET	Electronics Technician, Surface Warfare	2672	2448	91.6%	82.8%	55.5%	74.5%
ET_NUC_SS	Electronics Technician, Nuclear Power, Submarine	Recruited as NUC, see EM_NUC_SS #s			51.9%	46.4%	68.5%
ET_NUC_SW	Electronics Technician, Nuclear Power, Surface Warfare	Recruited as NUC, see EM_NUC_SS #s			36.2%	41.0%	65.7%
ET_SS_NAV	Electronics Technician, Submarine, Navigation Division	Recruited as SECF, see FT #s			75.6%	80.0%	60.0%
ET_SS_RADIO	Electronics Technician, Submarine, Radio Frequency Division	Recruited as SECF, see FT #s			69.5%	78.6%	100.0%

Rating	Rating Proper Name	Recruiting Fiscal Year To Date (FYTD) March 2009			Reenlistment Rate FYTD 2009		
		Total FY Goal	Total FY Recruit to Date	FY % RTD	Zone A (Goal = 54%)	Zone B (Goal = 63%)	Zone C (Goal = 81%)
		FC	Fire Controlman	Recruited as AECF, see ET #s	ET #s	90.0%	59.8%
FC AEGIS	Fire Controlman, AEGIS Weapons System	Recruited as AECF, see ET #s	ET #s	89.9%	75.6%	76.0%	
FT	Fire Control Technician	1156	982	84.9%	71.1%	100.0%	
GM	Gunner's Mate	564	594	105.3%	47.9%	94.5%	
GSE	Gas Turbine Systems Technician, Electrical	178	175	98.3%	66.0%	80.0%	
GSM	Gas Turbine Systems Technician, Mechanical	268	260	97.0%	68.7%	75.7%	
HM	Hospital Corpsman	3124	3149	100.8%	58.5%	85.4%	
HT	Hull Maintenance Technician	300	290	96.7%	34.0%	75.0%	
IC	Interior Communications Electrician, Surface Warfare	306	301	98.4%	51.2%	92.1%	
IS	Intelligence Specialist	516	525	101.7%	91.7%	90.3%	
IT	Information Technology	1421	846	59.5%	65.7%	78.5%	
LN	Legalman	Not a Recruited Rating		100.0%	100.0%	84.6%	
MA	Master-Ar-Arms	1420	1427	100.5%	62.7%	73.0%	
MC	Mass Communications Specialist	118	114	96.6%	60.4%	88.5%	
MM	Machinist's Mate, Surface Warfare	453	498	109.9%	34.2%	81.6%	
MM_NUC_SS	Machinist's Mate, Nuclear Power, Submarine Warfare	Recruited as NUC, see EM_NUC_SS #s			46.8%	61.5%	
MM_NUC_SW	Machinist's Mate, Nuclear Power, Surface Warfare	Recruited as NUC, see EM_NUC_SS #s			40.6%	69.3%	
MM_SS_AUX	Machinist's Mate Submarine	473	485	102.5%	82.8%	90.0%	
MM_SS_WEPS	Machinist's Mate Submarine Weapons	Recruited with MM_SS_AUX			62.8%	92.3%	
MN	Mineman	167	164	98.2%	54.5%	75.0%	
MR	Machinery Repairman	56	60	107.1%	42.4%	75.0%	
MT	Missile Technician	150	137	91.3%	85.3%	100.0%	
MU	Musician	51	28	54.9%	55.6%	92.3%	

Rating	Rating Proper Name	Recruiting Fiscal Year To Date (FYTD) March 2009			Recruitment Rate FYTD 2009		
		Total FY Goal	Total FY Recruit to Date	FY % RTD	Zone A (Goal = 54%)	Zone B (Goal = 63%)	Zone C (Goal = 81%)
NAC	Naval Aircrew	1017	787	77.4%	78.3%	82.9%	97.8%
NC	Navy Counselor	Not a Recruited	Rating			100.0%	100.0%
NC (CRF)	Navy Counselor, Career Recruiter	Not a Recruited	Rating			100.0%	96.0%
ND	Navy Diver	200	202	101.0%	85.7%	90.9%	100.0%
OS	Operations Specialist	854	866	101.4%	56.9%	68.2%	68.2%
PC	Postal Clerk	49	49	100.0%	61.5%	61.9%	94.1%
PR	Aircrew Survival Equipmentman	238	248	104.2%	66.7%	78.2%	86.4%
PS	Personnel Specialist	197	210	106.6%	50.5%	66.0%	92.5%
QM	Quartermaster, Surface Warfare	137	249	181.8%	47.6%	72.5%	71.4%
RP	Religious Program Specialist	91	91	100.0%	64.0%	68.8%	77.8%
SB	Special Warfare Boat Operator	160	163	101.9%	74.3%	88.9%	66.7%
SH	Ship's Serviceman	303	336	110.9%	53.1%	58.3%	97.4%
SK	Storekeeper	434	446	102.8%	71.0%	76.6%	88.9%
SK(SS)	Storekeeper, Submarine	51	66	129.4%	87.5%	73.7%	100.0%
SO	Special Warfare Operator	1285	1068	83.1%	100.0%	89.0%	90.3%
STG	Sonar Technician, Surface	408	339	83.1%	72.1%	54.9%	75.0%
STS	Sonar Technician, Submarine	Recruited as SECF, see FT #s			58.5%	77.3%	66.7%
SW	Steelworker	86	114	132.6%	40.9%	87.0%	85.7%
UT	Utilities Constructionman	109	103	94.5%	71.7%	88.9%	77.8%
YN	Yeoman	330	366	110.9%	62.1%	72.9%	89.9%
YN(SS)	Yeoman, Submarine	68	81	119.1%	90.0%	83.3%	100.0%

*through end of March 2009

*Data source: NRMS April 05 2009

The Navy continues to recruit and retain high quality individuals for the officer corps.

Officer Recruiting	FY09 Goal	Attained to Date	% Attained to Date	SELECT	% Attained+ SELECT	FY08 % Attained
Pilot Officer	250	147	59%	35	73%	103%
Naval Flight Officer	116	79	68%	13	79%	108%
Surface Warfare Officer	283	182	64%	38	78%	105%
Surface Warfare Officer (Nuclear)	38	17	45%	16	87%	106%
Submarine Officer	129	26	20%	49	58%	106%
Special Warfare Officer	18	10	56%	1	61%	106%
Explosive Ordnance Disposal Officer	2	2	100%	0	100%	100%
Intelligence Officer	43	35	81%	8	100%	100%
Information Warfare Officer	24	8	33%	4	50%	103%
Aerospace Engineering Duty Officer	17	15	88%	2	100%	100%
Public Affairs Officer	5	3	60%	1	80%	100%
Supply Corps Officer	156	127	81%	22	96%	104%
Oceanography Officer	4	1	25%	0	25%	100%
Civil Engineer Corps Officer	58	22	38%	27	84%	102%
Judge Advocate General Officer	5	4	80%	0	80%	100%
Nuclear Reactors Officer	12	3	25%	2	42%	100%
Instructor	24	2	8%	5	29%	100%
Chaplain Corps Officer	71	17	24%	5	31%	91%
Judge Advocate General Student	91	18	20%	5	25%	80%
Chaplain Student	61	3	5%	13	26%	77%
TOTAL	1407	721	51%	246	69%	100%

Officer Recruiting (cont) Medical Specialties	FY09 Goal	Attained to Date	% Attained to Date	SELECT	% Attained+ SELECT	FY08 % Attained
Dental Corps Direct Accession (DA)/Recall	19	2	11%	4	32%	94%
Dental Corps Health Profession Scholarship Program (HPSP)	90	84	93%	6	100%	100%
Dental Corps Health Service Collegiate Program (HSCP)	25	8	32%	6	56%	53%
Dental Corps Financial Assistance Program (FAP)	1	0	0%	1	100%	100%
Medical Corps DA/Recall	25	4	16%	1	20%	80%
Medical Corps HPSP	245	67	27%	25	38%	100%
Medical Corps HSCP	25	9	36%	3	48%	120%
Medical Corps FAP	19	2	11%	7	47%	89%
Medical Service Corps DA/Recall	124	31	25%	48	64%	102%
Medical Service Corps HPSP (Physician Assistants)	17	12	71%	5	100%	100%
Medical Service Corps HPSP (Optometry)	10	10	100%	0	100%	100%
Medical Service Corps HPSP (Podiatry)	3	2	67%	0	67%	N/A
Medical Service Corps HSCP	61	32	52%	13	74%	133%
Nurse Corps DA/Recall	81	39	48%	40	98%	149%
Nurse Corps Nurse Candidate Program (NCP)	55	33	60%	10	78%	100%
TOTAL	800	353	42%	169	63%	104%

Data: NRC Official 1 April 09

Retention for Naval Officers

Surface Warfare Officer

Surface Warfare Officer Retention is measured from the third year of commissioned service to the ninth year and is currently averaging 32 percent - unchanged from Fiscal Year 2007 rate. Surface Warfare Officer Retention has improved since the beginning of the decade.

Aviation

All-Aviators between 7-12 years of commissioned service cumulative continuous rate (CCR) for first quarter fiscal year 2008 is 51.5% - unchanged from Fiscal Year 2007 rate. Pilot CCR is 50.6% - up 1.2% from Fiscal Year 2007. Naval Flight Officer CCR is 53.8% down 2.3% from Fiscal Year 2007. Aviation retention is on track for Department Head milestone.

Nuclear Power Community

Nuclear-powered warships comprise nearly 40 percent of the Navy's major combatants and represent key strategic elements of America's national security posture now and for the foreseeable future. The Navy Nuclear Propulsion Program (NNPP) has achieved an unparalleled safety record and ensured the operational readiness of these vital assets in support of national security objectives. The sustained success of the Naval Nuclear Propulsion Program is a direct result of its superior personnel, rigorous selection and training, and the high standards that exceed those of any other nuclear program in the world. Continuing this unparalleled record of safety and successful operations depends upon attracting and retaining the correct quantity and highest quality of officers and enlisted personnel.

Since 1999, DoN has not achieved accession goals for nuclear trained officers in three separate years - Fiscal Year 2008 (457 of the required 474 nuclear trained officers), Fiscal Year 2005 (465 of the required 494) and Fiscal Year 1999 (457 of the required 480).

The technical, leadership, and management expertise developed in the NNPP are highly valued in the civilian workforce. Consequently, nuclear officer retention remains a challenge. We have met submarine officer retention goals only once in the past five years. We do expect to achieve our submarine officer retention target for Fiscal Year 2009 for the first time in three years. The NNPP retention challenge has contributed to Navy's current shortage of control grade officers (Captains, Commanders, and Lieutenant Commanders) and is the cause of the submarine community's current 366 control grade officer shortfall. Additionally, the nuclear-trained surface warfare community continues to experience the lowest junior officer retention of any Unrestricted Line (URL) community. We do expect to meet our Fiscal Year 2009 retention goal for nuclear-trained surface warfare officers.

Special Warfare (SEALs)

SEAL Officer retention follows economic trends and has improved slightly from 73% in FY-03 to 84% in FY-08. Despite this improvement in retention there will always be losses associated with the stress that comes from multiple combat tours and other natural losses. At a time of

sustaining the high Operational Tempo demanded of the community, every trained and qualified SEAL is important.

Explosive Ordinance Disposal (EOD)

The EOD Officer community has an established retention goal of 50% (calculated using the Cumulative Continuation Rate (CCR) of officers from years six through eleven); however, historic average retention is 37%. While the Lieutenant (LT) Critical Skills Retention Bonus (CSRB) has influenced retention to meet continuation rate goals at the LT level, the community also implemented a CSRB for Lieutenant Commander (LCDR).

The community has an established CCR retention goal of 90% for officers in 12-14 Years Commissioned Service (YCS). The historic (last 4 years) CCR of officers in YCS 12-14 has averaged 79%. After the first year of implementation, the retention incentive targeting LCDRs ensured a healthy number of officers were in zone for CDR. The community is on pace to achieve its 90% goal at the end of FY10.

Human Resource Officer

The Human Resource Community has had an average retention of 90.5% over the last four fiscal years, and is on pace for a 91.5% retention this year. A slight reduction in retirement requests primarily at the O5 and O6 paygrades is the reason for the slight increase in retention for the community.

Information Professional, Information Warfare and Intelligence

Retention in the three communities over the last several years has been good. There are many contributing factors e.g., patriotism and meaningful employment, continuing to facilitate high retention in these three communities.

Public Affairs Officer

Public Affairs Officer community is experiencing a slight decrease in retention when compared to historical data from the last 10 years. The decrease is being experienced at the O-4, O-5 and O-6 levels, each having 50% more officers resigning or retiring when compared to the historical average. However, due to the small size of the community, (211 officers), these percentages only represent one or two officers at each grade.

Judge Advocate General

Judge Advocate General's Corps is experiencing higher than average retention at the O-3 and O-5 paygrades. We are seeing a 30% increase in retention at the O-3 paygrade as compared to the 3 year average and a 52% increase as compared to the 5 year average. We are seeing a 50% increase at the O-5 paygrade as compared to the 3 year average and 58% increase as compared to the 5 year average. We are not experiencing any appreciable change at the O-6 paygrade in

retention levels. We are experiencing a decrease in retention at the O-4 paygrade. However, many of these are statutory retirements.

Health Professions

Retaining the proper specialty mix is Navy Medicine's primary retention challenge. Shortages continue to exist in critical specialties in which operational tempo is high and/or in which pay disparities exist between military and the private sector.

Navy Medicine has been tasked with supporting the increased mental health mission associated with the Global War on Terrorism (GWOT), including support for wounded warriors, and the Operational Stress Control and Restoration (OSCAR) program. This mission requires a significant growth and retention of mental health and rehabilitation providers for traumatic brain injury.

Retention within several Medical Service Corps, Medical Corps, Nurse Corps, and Dental Corps specialties will require continued close scrutiny, including:

- Medical Service Corps: clinical psychology, social worker, environmental health officer, and physician's assistant,
- Medical Corps: general surgery, family practice, emergency medicine, preventative medicine, and psychiatry
- Dental Corps: general dentists, endodontists, oral surgeons and prosthodontists.
- Nurse Corps: Perioperative Nurses, Critical Care Nurses, and Family Nurse Practitioners

Engineering Duty Officer (EDO)

The engineering duty officer has had average retention over the last several years. We have seen a slight reduction in retention this year as evidenced by slightly higher than expected resignations/retirements. The EDO community will not make up for its losses via accessions this year, a trend that has been repeated over the past several years.

Supply Corps

Supply Corps is experiencing an increase in retention when compared to the previous five fiscal years. A 40% reduction in retirement requests primarily at the O5 and O6 paygrades is the main contributor to the current increased retention for the community.

Chaplain Corps

The continuation rate for chaplains at the 3-12 years remains at above 90%. Average retention rates for the controlled grades FY97-08 hover between 85-93%. This year is slightly higher due to vacancies created by FY08 SER.

Civil Engineering

The Civil Engineer Corps (CEC) community is a Limited Supply/High Demand career field in support of GWOT. Retention has declined over the last several years, especially in the junior officer ranks. Specifically, the CEC lost 12.4% and 12.5% of its junior officer inventory in FY07 and FY08, respectively. The 20 year average for junior officer losses is 10.7%. A Critical Skills Retention Bonus was implemented in FY08 and has mitigated the issues associated with increased junior officer losses.

MARINE CORPS RECRUITING AND RETENTION

Question. Mr. Barnum, are there plans to analyze how to keep mission-critical MOSs filled, and what is the operational impact of these shortages?

Answer. The Marine Corps is constantly analyzing how to fill all MOSs, HD/LD MOSs in particular. Accession and Retention Plans are developed to fill all MOS requirements. Shortages in mission-critical MOSs have an operational impact on the Marines currently in the MOS as they will have less opportunity for dwell. Individually, Marines in these MOSs likely have less opportunity to experience other aspects of the Marine Corps, e.g., Special Duty Assignments, that tend to provide for professional growth as a Marine leader and to positively affect retention propensity. Commanders and their Marines always work toward the mission and mitigate the consequences of shortages in mission-critical MOSs.

Question. General Coleman, the Committee is very concerned regarding the recruitment and retention of mission-critical Military Occupational Specialties (MOS). Given the poor state of the economy and increased retention, has the fill rate for these MOSs improved? If not, what steps are you taking to fill these positions?

Answer. Fill rates in critical MOSs have greatly improved during FY09. Prudent use of Enlistment Bonuses has allowed us to increase the numbers of accessions in our critical programs that will support shortfalls and reenlistments in the future. With respect to retention, Selective Reenlistment Bonuses (SRB) have allowed us to reenlist 291 more Marines from our ten most critical MOSs as compared to the same time last year. Challenges continue for some MOSs (i.e. Intel, EOD, etc.) that are both lateral move MOSs and increased as a result of the 202K growth. Again, a strong SRB program has allowed us to entice Marines to reenlist for a lateral move into these critical MOSs.

Question. General Coleman, 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 MOS?

- 76% (31 OF 41) Occ Fields are \geq 90% of 202K requirement
3 over 110% (03,31,46)
Largest Occ Field 03XX (Infantry) at 119% (+6,185)
- 24% (10 of 41) Occ Fields are $<$ 90% of 202K requirement
Shortest Occ Field 73XX (Enlisted Flight Crews) at 69% (- 156)
- 83% (34 OF 41) Occ Fields are forecasted to be \geq 90% of 202K requirement by end of FY09
- All Occupational fields forecasted to be \geq 90% of 202K requirement by end of FY12

NAVY ENLISTMENT AND RETENTION BONUSES

Question. Admiral Ferguson, to date, what was the total dollar amount spent on Navy recruiting and retention bonuses for FY2009?

Answer. To date, Navy has spent approximately \$423M on recruiting and retention bonuses. This amount includes both initial and anniversary payments.

Question. General Coleman, to date, what was the total dollar amount spent on Marine Corps recruiting and retention bonuses for FY2009?

Answer. To date, the Marine Corps has spent \$30.9M on Enlistment Bonuses and \$236.2M on retention bonuses.

Question. Admiral Ferguson, what is the range of individual bonuses for recruiting? For retention? Please explain why there are differences.

Answer. There are a wide range of bonuses used by Navy to recruit and retain Sailors. While the bonus programs may vary in programmatic details, they are all derived from market analysis. We adjust the specific bonus amount for a given skill in response to the projected effect current and future economic conditions will have on manning and retention levels.

Bonuses are employed in recruiting to attract individuals with specialized, critical skills. Most ratings in the Navy are eligible for Enlistment Bonuses (EB) such as language proficiency. In response to demand for Navy employment, Navy Recruiting Command has cut the number of active duty EB eligible ratings from 52 to just 10 in FY09. Because recruitment of Sailors begins as much as one year before accession on active duty, recruitment bonuses are based almost entirely on current conditions rather than on economic projections over the lifetime of a Sailor. Currently, EBs range from \$6,000 to \$40,000 for active duty accessions and are paid at gates based on program specifications such as completion of Recruit Training, completion of "A" or "C" School, or completion of specialized training curriculum. For FY08, 45% of the 38,485 active duty accessions took an enlistment bonus. For FY09, 48% of the projected 35,500 active duty accessions have elected to receive an EB.

Selective Reenlistment Bonus (SRB) amounts can range from \$0, where we have determined a bonus is not needed to meet our retention goals for a given rating/skill, to a maximum of \$90,000, used to retain personnel in some of our most critical, highly-technical skill sets, where training investments and replacement costs are high. Within this range, Navy employs econometric modeling to target SRB payment levels to achieve critical skill retention. For example, at the beginning of FY09 approximately 38,000 of 270,000 sailors were eligible for SRB. To date, we have reenlisted 9,163 members, and under our most recent award plan released 11 March about 5,500 eligible sailors remained who had not made their reenlistment decision.

We have also instituted several retention bonus programs under the umbrella of the Critical Skills Retention Bonus (CSR) authorized in 37 U.S. Code 355. In general, bonus programs under this authority are targeted at very specific, hard to retain and hard to replace populations at the more senior points in the career continuum. CSR amounts can be as much as \$150,000 lump-sum payments for Special Operations Technicians (i.e., SEALs) with 19 years of service who agree to remain on active duty for 6 years. Members are not authorized to receive more than one bonus at a time.

Question. General Coleman, what is the range of individual bonuses for recruiting? For retention? Please explain why there are differences.

Answer. The range for recruiting bonuses is \$5-\$25K. There are two objectives of recruiting bonuses. One, is to attract qualified applicants into specific programs which are either critically short or to fill those technical fields that require high educational or test prerequisites. Two, is to ship recruits at specific times of the year which optimizes the training process. This range accurately reflects those aspects in detail.

Selective Reenlistment Bonuses (SRB) range from a low of \$5,500 to a high of \$89,000. There are differences for three primary reasons: (1) some MOSs had high inventories which required a lower reenlistment rate; (2) increase in 202K requirements; and (3) civilian employment opportunities.

Fifty-four MOSs (approx. 25%) had no bonus offered in FY09.

Question. Admiral Ferguson, have you found any imbalances or inequities in your recruiting and retention bonus structure?

Answer. Our bonus rate is market-driven and offered only to a portion of individuals in the Navy. The amounts are established based on current and projected economic conditions and accession and retention rates versus service demand. As the economic environment changes, bonus amounts are routinely adjusted based on analysis of recruiting and retention behavior. In general, the adaptive model of the current bonus structure serves us well. The agile and flexible nature of the structure, coupled with continuous analysis, allows us to constructively address any imbalances or inequities that may arise.

Question. General Coleman, have you found any imbalances or inequities in your recruiting and retention bonus structure?

Answer. No. There have been no imbalances in recruiting bonuses. Recruiting bonuses are currently structured to make every recruiting program or skill set equally attainable as well as ensure that the manpower flow to recruit training is optimized. Linguists, which have a \$25K bonus, require very high test and security entrance requirements as well as a difficult two year school. Shipping bonuses which are a \$5K bonus, gives the Marine Corps the ability to ship recruits in the more difficult shipping months, which greatly increases the optimization of training by decreasing uneven flow rates.

Our SRB program is designed to shape and sustain the career force needed to meet the 202K force structure requirements. Some MOSs with greater demand are paid more e.g., Intel, EOD, Linguist, Recon, etc.

Question. Mr. Barnum, does the Department of the Navy plan to review its recruiting and retention bonus program for both the Navy and Marine Corps?

Answer. The Navy continually analyzes the monetary incentives it provides to attract, recruit, and retain the highest quality individuals. We have taken a targeted investment approach to ensure we are using monetary incentives to attract and retain the skill sets and quantity required to meet mission requirements. This year we have reduced reenlistment bonuses and accession bonuses for the Active Component. Although we have reduced these incentives, they remain an invaluable tool and we will need to remain flexible for any future increase or decrease to respond to changing economic conditions.

For the Reserve Component we have maintained bonus payment amounts over the past year. However, we have refined, and continue to refine, the targeted groups so that recruitment and retention bonuses are only given to those members in undermanned and critical skill sets.

The Marine Corps conducts an annual review of enlistment and Selective Reenlistment Bonus (SRB) programs in an effort to optimize the resources required to maintain the 202K force.

Question. Mr. Barnum, are there plans to promote non-monetary bonuses such as tuition assistance and the new G.I. Bill?

Answer. The Navy is continually looking at opportunities to promote non-monetary incentives to attract and retain the best and brightest. These include education benefits (TA and Post 9/11 G.I. Bill), paternity leave (approved by Congress in the NDAA 2009), Career Intermission Program, telework, and career path flexibility. We believe that we have to be a leader in human resource solutions, exploring innovative ways to deliver the highest quality Sailor to the Fleet.

The Marine Corps uses tuition assistance and post-service education funding as part of both recruiting and retention. There are intangibles such as earning the title of a "United States Marine," being part of a small, elite fighting organization, duty station options, etc. that come into play in recruiting and retaining Marines. We expect that the new G.I. Bill will both entice Marines to leave or stay in depending on their individual situations. Transferability of educational benefits to spouse, and/or children will certainly be attractive to our career force and should help retain Marines with more than six years of service. True impacts of the new G.I. Bill will not be seen until 2010 and beyond.

Question. Admiral Ferguson, is there any concern that enlistment and re-enlistment bonuses are now viewed by sailors as an entitlement instead of a bonus?

Answer. Any compensation package that is sustained over time and not adjusted to market forces could be viewed as an entitlement by some service members. Navy has recently adjusted both its enlistment and reenlistment bonus to respond to current market forces. Navy will continue to analyze monetary incentive levels, and use only what is necessary to incentivize the retention behavior to support our many requirements.

Question. General Coleman, is there any concern that enlistment and reenlistment bonuses are now viewed by Marines as an entitlement instead of a bonus?

Answer. Yes, and we need to remain cognizant of these expectations as we manage our bonus programs. However, the Marine Corps has always emphasized the intangibles of service—the pride of being a Marine and the bond that is forged in combat. Additionally, Marines are well aware that bonuses are tied to career force reenlistment requirements, are analyzed each year, and may change based on current and future manpower needs. Furthermore, recruiting bonuses are only given to those recruits with the higher test scores or prerequisites, which mean that some recruits will not even qualify for a recruiting bonus.

Question. Mr. Barnum, since the state of the economy has contributed significantly towards recruiting and retention success, do the Navy and Marine Corps plan to reduce or eliminate bonuses? If so, what bonuses will be reduced or eliminated?

Answer. The Navy continually analyzes the monetary incentives it provides to attract, recruit, and retain the highest quality individuals. We have taken a targeted investment approach to ensure we are using monetary incentives to attract and retain only the skills sets and quantity required to meet mission requirements. This year we have reduced reenlistment bonuses and accession bonuses. Although we have reduced these incentives, they remain an invaluable tool and we will need to remain flexible for any future increase or decrease to respond to changing economic conditions.

Every year, the Marine Corps reviews both its Enlistment Bonus (EB) and Selective Reenlistment Bonus (SRB) Programs to insure they best support both the accession and retention requirements to support the 202K force. Bonuses are increased or decreased based on the yearly end strength and inventory (MOS) requirements. We are currently reviewing our plans for FY10, and based on FY09 results EBs and SRBs will be adjusted as required. We anticipate publishing the retention plan in June and the accession plan in late summer.

Question. Mr. Barnum, can you provide the committee with a complete list of all recruitment and retention bonuses for each MOS? Can you also provide the average bonus of each MOS?

Answer. There are a wide range of bonuses used by Navy to recruit and retain Sailors. While the bonus programs may vary in programmatic details, they are all derived from detailed analysis. We adjust the specific bonus amount for a given skill in response to the projected effect current and future economic conditions will have on manning and retention levels.

Bonuses are employed in recruiting to attract individuals with specialized, critical skills. Most ratings in the Navy are eligible for Enlistment Bonuses (EB) such as language proficiency. In response to unprecedented demand for Navy employment, Navy Recruiting Command has cut the number of active duty EB eligible ratings

from 52 to just 10 in FY09. Because recruitment of Sailors begins as much as one year before accession on active duty, recruitment bonuses are based almost entirely on current conditions rather than on economic projections over the lifetime of a Sailor. Currently, EBs range from \$6,000 to \$40,000 for active duty accessions and are paid at gates based on program specifications such as completion of Recruit Training, completion of "A" or "C" School, or completion of specialized training curriculum. For FY08, 45% of the 38,485 active duty accessions took an enlistment bonus. For FY09, 48% of the projected 35,500 active duty accessions have elected to receive an EB. In response to unprecedented demand for Navy employment, NRC has cut the number of active duty EB eligible ratings from 32 to just ten.

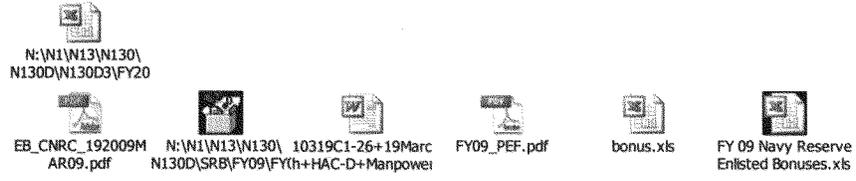
Selective Reenlistment Bonus (SRB) amounts can range from \$0, where we have determined a bonus is not needed to meet our retention goals for a given rating/skill, to a maximum of \$90,000, used to retain personnel in some of our most critical, highly-technical skill sets, where training investments and replacement costs are high. Within this range, Navy employs econometric modeling to target SRB payment levels to achieve critical skill retention. For example, at the beginning of FY09 approximately 38,000 of 270,000 sailors were eligible for SRB. To date, we have reenlisted 9,163 members, and under our most recent award plan released 11 March about 5,500 eligible sailors remain who had not made their reenlistment decision.

We have also instituted several retention bonus programs under the umbrella of the Critical Skills Retention Bonus (CSRB) authorized in 37 U.S. Code § 355. In general, bonus programs under this authority are targeted at very specific, hard to retain and hard to replace populations at the more senior points in the career continuum. CSRB amounts can be as much as \$150,000 lump-sum payments for Special Operations Technicians (i.e., SEALs) with 19 years of service who agree to remain on active duty for 6 years. Members are not authorized to receive more than one bonus at a time.

In addition to the bonuses used to recruit and retain Sailors, Navy employs other pays to incentivize Sailors to accept assignments which entail a level of responsibility above and beyond what is normally expected (including when these kinds of assignments may occur throughout a career in a particular rating/skill), are chronically hard-to-fill, or are located in less desirable locations. These include pays such as Special Duty Assignment Pay (SDAP), Assignment Incentive Pay (AIP), Career Enlisted Flyer Incentive Pay (CEFIP), etc.

The Marine Corps' SRB program is designed to shape and sustain the career force needed to meet the 202K force structure requirements. The Marine Corps' bonus program operates in a similar manner as the Navy's.

More specifics regarding these various bonuses and special and incentive pays can be found in the attached files.



15 Jun 2009

Enlisted Bonuses and Special/Incentive Pays

Type	Amount	One	Installation	Distribution	Lump Sum
OVERVIEW: In general, the Selective Retention Bonus (SRB) is used to encourage personnel to remain in designated critical ratings/positions (NECA). Goal is to retain difficult to replace, expensive to train or grow personnel. SRB award levels are strategically related and based on (P, F, S, Z).					
Zone A - Personnel with minimum of 17 months continuous active duty to 5 years. Only one bonus in this zone.	Paid in multiples (award levels) of 0.5. Current range is 0.5 to 1.0. Effective May 14, 2009, range will be 0.5 to 7. SRB is calculated as (months of active duty) x (base pay X additional obligation device in (zone A, B, C) X (years of service)).	Same as zone A	Same as zone A	50 percent paid up front at time of reenlistment and remaining 50 percent paid in annual installments based on length of contract. Example: a 5 year reenlistment contract would have 5 annual installments.	N/A
Zone B - Personnel with 8 to 10 years of active duty. Only one bonus in this zone.	Same as zone A	Same as zone A	Same as zone A	Same as zone A	N/A
Zone C - Personnel with 10 to 14 years of active duty. Only one bonus in this zone.	Same as zone A	Same as zone A	Same as zone A	Same as zone A	N/A
Enlisted Superior Retention Pay					
OVERVIEW: Issued under the statutory authority of the Critical Skills Retention Bonus (CSRB), the Enlisted Superior Retention Pay (ESRP) is used to incentivize personnel to remain in designated critical ratings/positions/Very Enlisted Classification (NECA). The goal is to retain difficult to replace, expensive to train or grow personnel. The ESRP program replaces the SRB program in selected senior personnel ratings. Currently, it is employed only with respect to nuclear, strategic, and ESRP award levels are strategically related and based on (P, F, S, Z) and the number of years of service. Members must remain for a minimum of two years not to exceed six years. ESRP eligibility is currently from 10 years of service to less than 30 years of service divided into zones as described below. The statutory maximum payment for ESRP is \$200,000 over the course of a career.					
Zone A - Personnel with greater than or equal to 10 years of service, but less than 15 years of career service. Only one bonus in this zone.	Paid in multiples (award levels) of 0.5. Current range is 0.5 to 8.5. Award level ceiling set at \$40K. Example: 8.5 year reenlistment contract would have 5 annual installments combined with SRB not to exceed \$200K.	Same as zone A	Same as zone A	50 percent paid up front at time of reenlistment and remaining 50 percent paid in annual installments based on length of contract. Example: a 5 year reenlistment contract would have 5 annual installments.	N/A
Zone B - Personnel with greater than or equal to 15 years of service, but less than 20 years of career service. Only one bonus in this zone.	Multiple set at 1.5. Computation of bonus same as Zone A.	Same as zone A	Same as zone A	Same as zone A	N/A
Enlistment Bonus					
OVERVIEW: In general, the Enlistment Bonus (EB) is used to recruit eligible personnel into designated critical ratings/positions. Layers of EB, as listed in the "installments" column (and further defined in this table below), are also used. These EBs are designed to attract certain portions of the American population, (e.g. those with some college education), or to influence certain behaviors (e.g. longer enlistments (6 or 8 yrs vs. 4 yrs), life to bootcamp at certain times of the year (i.e. winter months), and/or active certain test scores).					
Special Warfare Operator (SO, a.k.a. SEAL)	Multiple amount of Enlistment Bonus installments will equal \$40,000 (EB50).	\$40,000.00		\$1,000 or \$2,000 EB/PT at RTC. Remaining amount paid at 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000. May also be eligible for EBCC, EBED, & EBTC, which are paid separately as described in notes below.	N/A
Explosive Ordnance Disposal Technician (EOD)	Enlistment Bonus of \$40,000 (EB50).	\$40,000.00		\$1,000 or \$2,000 EB/PT at RTC. Remaining amount paid at 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000. May also be eligible for EBCC, EBED, & EBTC, which are paid separately as described in notes below.	N/A
New/Over (NO)	Enlistment Bonus of \$30,000 (EB30).	\$40,000.00		\$1,000 or \$2,000 EB/PT at RTC. Remaining amount paid at 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000. May also be eligible for EBCC, EBED, & EBTC, which are paid separately as described in notes below.	N/A
Special Warfare Boat Operator (SB, a.k.a. Special Warfare Combatant (SWC) Operator (SWCO))	Amounts vary from \$2,000 to \$25,000 depending on ship month. For example, Nuclear Fleet ships receive \$25K for shiping in the months of January, February, March, April, May, June, July, August, September, October, November, and December. Non-Jan (EB31).	\$40,000.00		\$1,000 or \$2,000 EB/PT at RTC. Remaining amount paid at 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000. May also be eligible for EBCC, EBED, & EBTC, which are paid separately as described in notes below.	N/A
Various nuclear ratings/positions designated as critical.	Enlistment Bonus of \$20,000 (EB20).	\$40,000.00		\$1,000 or \$2,000 EB/PT at RTC. Remaining amount paid at 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000. May also be eligible for EBCC, EBED, & EBTC, which are paid separately as described in notes below.	N/A
Various non-nuclear/non-SPECWAR/SPECOPS ratings/positions designated as critical.	Amounts vary from \$4,000 to \$12,000 depending on rating/program and ship month. For example, Constructionman (EB32) receives \$8K for shiping in the months of Nov-Jan, \$7K in the months of Feb-April, and \$4K in the months of May-October (EB32).	\$30,000.00		\$1,000 or \$2,000 EB/PT at RTC. Remaining amount paid at 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210, 220, 230, 240, 250, 260, 270, 280, 290, 300, 310, 320, 330, 340, 350, 360, 370, 380, 390, 400, 410, 420, 430, 440, 450, 460, 470, 480, 490, 500, 510, 520, 530, 540, 550, 560, 570, 580, 590, 600, 610, 620, 630, 640, 650, 660, 670, 680, 690, 700, 710, 720, 730, 740, 750, 760, 770, 780, 790, 800, 810, 820, 830, 840, 850, 860, 870, 880, 890, 900, 910, 920, 930, 940, 950, 960, 970, 980, 990, 1000. May also be eligible for EBCC, EBED, & EBTC, which are paid separately as described in notes below.	N/A
EB Notes					
	DEP Delayed Entry Program (EB33) up to \$6,000 for college credits. \$6K for associates. \$8K for bachelors. 20 percent of year (3) includes EBCC, EBED, EB31, and EBTC) is paid upon arrival at A school, remaining 80 percent is paid upon successful completion of program. EBCC for Nuclear Ratings (20 percent paid upon successful completion of NPS. Remaining 80 percent paid upon successful completion of program). EBED for Explosive Ordnance Disposal Technician (EOD) for a minimum of 10 months. (Currency is \$0 for F707). EB31/EB32 for Physical Boat Operator (SB, a.k.a. Special Warfare Combantant (SWC) Operator (SWCO)) for a minimum of 10 months. (Currency is \$0 for F707). EB32/EB33 for Training. \$2,000 paid upon successful completion of "Fall Week" (only for SO candidates). EB33/EB34 for Test Score Category. For members scoring sufficiently on battery test, a bonus based on every month > 6 months that member remains in DEP (only for SO candidates).			Enlistment Bonus will be paid upon successful completion of school pipeline training as required for EB31, EB32, EB33, and EBTC (unless noted otherwise).	

-----Original Message-----

From: DOD, NAVY, ORGANIZATIONS(UC), COMNAVCRUITCOM MILLINGTON TN(UC)
 [mailto:smtpdelivery@pac.nrems.navy.mil]
 Sent: Saturday, March 21, 2009 1:30
 To: DutyIT
 Subject: SUBJ/ENLISTMENT BONUS (EB) PROGRAM//

***** UNCLASSIFIED// *****

Subject: SUBJ/ENLISTMENT BONUS (EB) PROGRAM//
 Originator: COMNAVCRUITCOM MILLINGTON TN(UC)
 DTG: 192009Z Mar 09
 Precedence: ROUTINE
 DAC: General
 To: AIG 329, PERSUPP DET NTC GREAT LAKES IL(UC), PERSUPP DET RTC GREAT LAKES IL(UC), PERSUPP DET NEW LONDON CT(UC), PERSUPP DET BANGOR WA(UC), PERSUPP DET WASHINGTON DC(UC), PERSUPP DET YOKOSUKA JA(UC), PERSUPP DET WPNSTA CHARLESTON SC(UC), PERSUPP DET NORTH ISLAND CA(UC)
 Cc: CNO WASHINGTON DC(UC), DFAS CLEVELAND OH(UC), COMNAVCRUITCOM MILLINGTON TN(UC), PERSUPP DET PENSACOLA FL(UC)

 UNCLASSIFIED//
 MSGID/GENADMIN/N1//
 SUBJ/ENLISTMENT BONUS (EB) PROGRAM//
 REF/A/MSG/GENADMIN/151726ZJAN09//
 REF/B/DOC/OPNAV/05APR2007//
 REF/C/DOC/CNRC/22OCT2008//
 REF/D/MSG/CNRC//211710ZAUG08// NARR/REF A IS COMMANDER, NAVY RECRUITING COMMAND (CNRC) 07 NOV 2008 EB MESSAGE. REF B IS THE EB PROGRAM INSTRUCTION (OPNAVINST 1160.9). REF C IS COMNAVCRUITCOMINST 1130.8 (NAVY RECRUITING MANUAL-ENLISTED). REF D IS THE CURRENT NAVY COLLEGE FUND-LOAN REPAYMENT PROGRAM MESSAGE.// RMKS/1. THIS MESSAGE REPLACES REF A FOR INDIVIDUALS ENTERING THE DELAYED ENTRY PROGRAM ON OR AFTER 01 APR 09. THOSE ALREADY IN DELAYED ENTRY PROGRAM (DEP) ARE NOT AFFECTED BY THIS MESSAGE.
 2. THE ENLISTMENT BONUS (EB) PROGRAM HAS EXPANDED OVER THE PAST SEVERAL YEARS IN SUPPORT OF NAVY'S EMERGING STRATEGY FOR OUR PEOPLE. THIS HAS ENABLED NAVY TO ENLIST PERSONNEL WITH THE RIGHT SKILL MIX ALONG WITH THOSE WITH COLLEGE CREDITS AND PROVIDE FOR EXTENDED ENLISTMENTS TO MEET THE NEEDS OF THE FORCE. THE ENLISTMENT BONUS PROGRAM INCLUDES:
 A. EB SOURCE RATE (EBSR)
 B. EB SOURCE RATE - NAVY COLLEGE FUND (EBSR-NCF)
 C. EB FOR PHYSICAL SCREENING TEST (EBPST)
 D. EB FOR LANGUAGE PROFICIENCY (EBLP)
 COMBINATIONS OF ENLISTMENT BONUSES CAN BE TAKEN TOGETHER AND WILL BE REFERRED TO COLLECTIVELY AS "EB" IN THIS MESSAGE.
 3. POLICY: THE EFFECTIVE EB AWARD LEVEL MESSAGE DETERMINES THE AMOUNT OF EB THAT MAY BE AWARDED. THE MESSAGE IN EFFECT FOR A SAILOR IS DETERMINED BY THE DATE THE SAILOR ENTERS THE DEP. EBSR AWARD LEVELS CAN VARY BASED ON SHIP MONTH. IF RECLASSIFICATION OCCURS WHILE IN THE DEP, CLASSIFIERS MUST CAREFULLY NOTE THE AWARD LEVEL FOR THE NEW SHIP MONTH TO DETERMINE THE SAILOR'S NEW AWARD LEVEL. CLASSIFIERS ARE NOT AUTHORIZED TO NEGOTIATE AWARD LEVELS. SAILORS ARE REQUIRED TO FULFILL ALL EB GUIDELINES, INCLUDING THE 12-MONTH EXTENSION REQUIREMENT (SEE NOTE 1 FOR EXCEPTIONS). FOR EXAMPLE, IF A 5YO-BU RECRUIT TAKES THE EBLP, THEN THIS RECRUIT WOULD HAVE TWO NAVPERS 1070/621, ONE FOR THE EXTRA 12-MONTHS FOR RATE TRAINING AND THE OTHER FOR TAKING THE EBLP.

Question. Admiral Ferguson, are there any MOSs that, even with bonuses, you still have a problem filling?

Answer. Yes. Nuclear operators and certain medical professionals continue to be a challenge.

THE NAVPERS 1070/621 (AGREEMENT TO EXTEND ENLISTMENT) FOR THE EBLP SHALL CONTAIN THE FOLLOWING STATEMENT: "TO ESTABLISH ELIGIBILITY FOR THE ENLISTMENT BONUS AS SPECIFIED IN OPNAVINST 1160.9." TOTAL ENLISTMENT FOR THIS RECRUIT IS SIX YEARS. NO ACTIVE DUTY ENLISTMENT TERM SHALL EXCEED SIX YEARS. COMBINATIONS OF EB AND NAVY COLLEGE FUND (NCF) ARE INDICATED BY RATING AND ARE SUBJECT TO CHANGE (SEE NOTE 2). COMBINATIONS OF EB AND LOAN REPAYMENT PROGRAM (LRP) AND COMBINATIONS OF LRP AND NCF ARE PROHIBITED. TOTAL EB INCENTIVE SHALL NOT EXCEED \$40,000.

4. MAINTENANCE AND TERMINATION:

A. IF A SAILOR CHANGES RATING, SKILL, PROGRAM, OR SHIP DATE WHILE IN THE DEP, THE ORIGINAL EFFECTIVE MESSAGE AT TIME OF ENROLLMENT INTO THE DEP REMAINS APPLICABLE TO THAT SAILOR. DO NOT DISCHARGE AND REENTER A SAILOR FROM THE DEP TO INCREASE AWARD LEVEL. IN ALL RECLASSIFICATION CASES, A NEW ENLISTMENT CONTRACT (ENLISTMENT GUARANTEE ANNEX (1133/52)) MUST BE GENERATED THAT REPLACES THE PREVIOUS CONTRACT. PAGE 13 ENTRIES CANNOT MODIFY OR CHANGE THE BONUS AMOUNTS ON AN EXISTING CONTRACT.

B. IF A SAILOR CHANGES RATING, SKILL, OR PROGRAM WHILE AT RTC, THE SAILOR MAY BE ELIGIBLE FOR NEW BONUS AMOUNTS. USE THE EB MESSAGE IN EFFECT ON THE DAY OF RECLASSIFICATION TO DETERMINE THE NEW AWARD AMOUNT. TO DETERMINE THE EBSR FOR THE SAILOR, USE THE MONTH THE SAILOR RECLASSIFIED AS THE SHIP MONTH SHOWN IN PARAGRAPHS 11, 12, OR 13. IF A SAILOR CHANGES RATING, SKILL, OR PROGRAM AFTER RTC, THEY ARE NOT ELIGIBLE FOR AN EB FOR THE NEW RATING, SKILL, OR PROGRAM, WITH ONE EXCEPTION: THOSE IN THE SEAL TRAINING PIPELINE THAT ATTRITE AT THE NAVY SPECIAL WARFARE CENTER (NSWC) PRIOR TO FINAL DESIGNATION AS AN SO-ATF WILL BE ELIGIBLE FOR A ONE-TIME OFFER TO RECLASSIFY INTO ONE OF THE FOLLOWING RATINGS: SB-ATF, EOD-ATF, ND-ATF, OR AIRCREW - RESCUE (AIRR). THE PRODUCTION MANAGEMENT OFFICE (PERS-00C23) WILL APPROVE ALL RECLASSIFICATION REQUESTS UNDER THIS GUIDANCE.

5. PRIOR SERVICE: TO BE ELIGIBLE FOR AN EB, A RETURNING ACTIVE DUTY SERVICE-MEMBER WHO IS A VETERAN MUST ENTER AT PAYGRADE E4 OR BELOW AND HAVE NOT PREVIOUSLY RECEIVED AN EB OR SELECTIVE REENLISTMENT BONUS (SRB). NAVY VETERANS SHOULD BE SCREENED FOR SRB ELIGIBILITY.

6. THE AWARD AMOUNTS FOR EB FOR COLLEGE CREDIT (EBCC) IS \$0.

7. EB FOR LANGUAGE PROFICIENCY (EBLP): A SAILOR WHO DEMONSTRATES A CRITICAL LANGUAGE PROFICIENCY AS OUTLINED IN THIS PARAGRAPH WILL EARN A \$10,000 EBLP. FTS, NCS, NAT, AND SELRES PROGRAM SAILORS ARE NOT ELIGIBLE. A SCORE GREATER THAN OR EQUAL TO 2.2 ON THE DEFENSE LANGUAGE PROFICIENCY TEST IS REQUIRED AND MUST BE ACHIEVED PRIOR TO GRADUATION FROM RTC. SAILORS RECEIVING AN EBLP ARE REQUIRED TO FULFILL ALL EB PROGRAM GUIDELINES, INCLUDING THE 12-MONTH EXTENSION. EBLP MAY BE COMBINED WITH OTHER EB'S. EBLP WILL BE RECOUPED IF THE SAILOR FAILS TO REMAIN IN ANY ONE OF THE RATINGS LISTED BELOW.

A. ELIGIBLE PROGRAMS AND RATINGS: 5YO BU, 5YO CE, 5YO CM, 5YO EA, 5YO EO, 5YO SW, 5YO UT, 5YO HM, SCHOOL GUARANTEE (SG) MA, SG LS, AND SG RP.

B. ELIGIBLE FOREIGN LANGUAGES: BALUCHI, PASHTU, KURDISH, SOMALI, PUNJABI, URDU, INDONESIAN, HINDI, PERSIAN IRANIAN (FARSI), PERSIAN AFGHAN (DARI), ARABIC (REGIONAL DIALECTS SUCH AS ALGERIAN, GULF, ETC.), TAUSUG/MORO, CHECHEN, TAMIL, MALAY, AND SWAHILI.

8. EB FOR PST (EBPST): SAILORS IN SPECWAR/SPECOPS/AIRR RATINGS WHO PASS THE PHYSICAL SCREENING TEST (PST) AT RECRUIT TRAINING COMMAND AT THE ELEVATED LEVEL ARE ELIGIBLE FOR THE EBPST. PARTICIPANTS WHO ACHIEVE STANDARDS FOR PASSING AT AN ELEVATED SCORE WILL RECEIVE \$2,000 EBPST. SPECIFIC STANDARDS FOR PASSING AT AN ELEVATED SCORE WILL BE PROMULGATED BY SEPARATE CORRESPONDENCE.

A. SAILORS WHO ATTRITE DURING SPECWAR/SPECOPS/AIRR TRAINING AND REMAIN IN THE NAVY WILL RETAIN ALL OF THEIR EBCC AND EBPST. IF THE SO-ATF SAILOR RECLASSIFIES AFTER ATTRITING FROM NSWC AS OUTLINED IN PARAGRAPH 4B OF THIS GENADMIN, THE SAILOR WILL HAVE HIS NEW EBSR REDUCED BY ANY EBPST PAYMENT ALREADY RECEIVED.

9. THE FOLLOWING EB PROGRAM PAYMENT PROCEDURES APPLY:

A. EBSR, EBSR-NCF AND EBLP: SAILORS BECOME ELIGIBLE FOR PAYMENT UPON SUCCESSFUL COMPLETION OF "A" AND/OR "C" SCHOOL AND DESIGNATION IN THE SKILL FOR WHICH THE SAILOR ENLISTED. FOR SAILORS IN SG OR 5YO PROGRAMS, THE MOST APPROPRIATE TIME OF PAYMENT IS UPON GRADUATION FROM "A" SCHOOL. FOR SAILORS IN THE AIRCREW - RESCUE (AIRR)/ADVANCED ELECTRONIC FIELD (AEF)/ADVANCED TECHNICAL FIELD (ATF)/PROFESSIONAL APPRENTICE CAREER TRACK (PACT) PROGRAMS, PAYMENT OCCURS AFTER THE SAILOR ARRIVES AT HIS/HER FIRST PERMANENT DUTY STATION. HOWEVER, FOR ATF-SO THE FINAL PAYMENT SHOULD FOLLOW GRADUATION FROM SEAL QUALIFICATION TRAINING (SQT). FOR SAILORS IN THE AIRCREW PROGRAM - RESCUE SWIMMER (AIRR), PAYMENT OCCURS AFTER GRADUATION OF FLEET REPLACEMENT SQUADRON AND ARRIVING AT HIS/HER FIRST PERMANENT DUTY STATION FILLING A 7815 NEC.

B. EBPST FOR SPECOPS/SPECWAR/AIRR: THE \$2,000 EBPST IS DEDUCTED FROM THE EBSR. EBPST PAYMENT WILL BE PROCESSED BY PERSONNEL SUPPORT DETACHMENT (PSD) GREAT LAKES PRIOR TO SAILOR DETACHING RTC. SAILORS WITH EBSR IN HIS/HER CONTRACT WILL RECEIVE THE REMAINING VALUE OF THE EBSR IAW PARAGRAPH 9A. ADJUSTMENTS TO BONUSES WILL BE MADE TO ENSURE THAT THE \$40,000 EB LIMIT IS NOT EXCEEDED. ALL SUBSEQUENT PAYMENT REQUESTS DESCRIBED BELOW WILL BE MADE THROUGH NPC PERS-811.

C. NUCLEAR FIELD PROGRAM: PAYMENT PROCEDURES FOR PHASED EB ARE LISTED IN PARAGRAPH 13 OF REF B. SAILORS RECEIVE MULTIPLE PAYMENTS PER PARAGRAPH 13 OF REF B. PSD'S SERVICING SCHOOLS SHOULD CONTACT NPC PERS-811 FOR FURTHER GUIDANCE ON PHASED PAYMENT AMOUNTS.

10. RESERVE BONUS PROGRAMS: NAVY RECRUITING ALSO ADMINISTERS TWO RESERVE BONUS PROGRAMS.

A. NEW ACCESSION TRAINING (NAT) (FORMERLY KNOWN AS THE "NON-PRIOR SERVICE BASIC" OR "NPSB" PROGRAM): SAILORS ENTERING THE NAT PROGRAM ARE NOT ELIGIBLE FOR ACTIVE DUTY EBSR. SEE REF C FOR NAT PROGRAM BONUS DETAILS.

B. NATIONAL CALL TO SERVICE (NCS): SAILORS ENTERING THE NCS PROGRAM ARE NOT ELIGIBLE FOR ACTIVE DUTY EB. THEY ARE ELIGIBLE FOR A \$5,000 CASH BONUS, LOAN REPAYMENT, OR EDUCATION ALLOWANCES. SAILORS MUST ANNOUNCE THE INCENTIVE SELECTION USING A DD FORM 2863 PRIOR TO ACCESSION TO ACTIVE DUTY. INITIAL ENTITLEMENT TO ANY OF THE ABOVE INCENTIVES IS PREDICATED ON COMPLETION OF THE TOTAL INITIAL ACTIVE DUTY OBLIGATION (15 MONTHS FOLLOWING INITIAL TRAINING). SEE REF C FOR NCS PROGRAM DETAILS.

11. EFFECTIVE 01APR09, FTS RECRUITS ENTERING THE DEP AND SCHEDULED TO SHIP IN FY09 ARE ELIGIBLE FOR EBSR IN THESE FY09 SHIP MONTHS:

RATING	SHIP MONTHS	EBSR
(AECF-FTS)	APRIL - SEPTEMBER:	\$6,000
NOTE 1		
(AV-FTS)	APRIL - SEPTEMBER:	\$8,000

12. EFFECTIVE 01APR09, ACTIVE DUTY RECRUITS ENTERING THE DEP AND SCHEDULED TO SHIP IN FY09 ARE ELIGIBLE FOR EBSR OR EBSR-NCF IN THESE FY09 SHIP MONTHS:

RATING	SHIP MONTHS	EBSR	EBSR-NCF
CTI-ATF	APRIL - SEPTEMBER:	\$20,000	\$13,000/350 PER MONTH
NOTE 1, 2			
IT-SG	APRIL - SEPTEMBER:	\$15,000	
MU-SG	APRIL - SEPTEMBER:	\$15,000	
SECF-5YO	APRIL - SEPTEMBER:	\$10,000	

NOTE 1

13. THE FOLLOWING USN PROGRAM IS ELIGIBLE FOR EBSR OR EBSR-NCF IN THESE SHIP MONTHS:

NF	NOVEMBER - JANUARY:	\$23,000	\$12,000/350 PER MONTH
NOTE 1/2	FEBRUARY - MAY:	\$25,000	\$13,000/350 PER MONTH
	JUNE - OCTOBER:	\$21,000	\$11,000/350 PER MONTH
AIRR-ATF	OCTOBER - SEPTEMBER:	\$25,000	
EOD-ATF	OCTOBER - SEPTEMBER:	\$40,000	
ND-ATF	OCTOBER - SEPTEMBER:	\$25,000	
SB-ATF	OCTOBER - SEPTEMBER:	\$25,000	
SO-ATF	OCTOBER - SEPTEMBER:	\$40,000	

NOTES:

(1) APPLICANTS IN THE PACT PROGRAM, NF, SECF-5YO, AND OTHER PROGRAMS WITH A TOTAL OF SIX YEARS OBLIGATION DO NOT NEED TO SIGN A 12-MONTH EXTENSION FOR PARTICIPATING IN THE EB PROGRAM.

(2) NCF PARTICIPANTS MUST BE BRIEFED THAT BENEFITS ARE COMBINED WITH MGIB AND THEREFORE CAN BE LESS THAN THE STATED MONTHLY AMOUNT BECAUSE OF FULL OR PART-TIME ACADEMIC STATUS, LENGTH OF OBLIGATION, ETC. REF D CONTAINS FURTHER GUIDANCE. EBSR-NCF CANNOT BE COMBINED WITH LRP.

14. FOR EB POLICY QUESTIONS CALL OPNAV N130D2 AT COMM (703) 695-3130/DSN 225. FOR PROCEDURAL QUESTIONS, MR. GARY TON, CNRC, AT COMM (901) 874-9322/DSN 882. FOR PHASED PAYMENT QUESTIONS, CONTACT PERS-811 AT COMM (901) 874-3215/DSN,882 OR EMAIL SCOTT.MCCANN@NAVY.MIL. FOR PRIDE QUESTIONS, CALL REGION EAST SENIOR CLASSIFIERS AT 901-874-7642/EMAIL MILL_REGION_EAST_EPO_STAFF@NAVY.MIL OR THE REGION WEST SENIOR CLASSIFIERS AT 901-874-9297/EMAIL MILL_REGWEST_CLASSIFIERS@NAVY.MIL

15. REQUEST WIDEST DISSEMINATION TO ALL RECRUITING ACTIVITIES AND PERSONNEL SUPPORT DETACHMENTS.

16. RELEASED BY RADM J. F. KILKENNY CNRC.//

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 RTTUZYUW RUEWMCS0000 0710054-UUUU--RUCRNAV.

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FM CNO WASHINGTON DC//N1//

TO NAVADMIN

INFO CNO WASHINGTON DC//N1//

BT

UNCLAS//N01300//

NAVADMIN 075/09

MSGID/GENADMIN/CNO WASHINGTON DC/N1/MAR//

SUBJ/SELECTIVE REENLISTMENT BONUS (SRB)//

REF/A/MSG/CNO WASHINGTON DC/100046ZFEB09//

REF/B/DOC/OPNAV/30JAN07//

REF/C/MSG/CNO WASHINGTON DC/091648ZJAN09//

REF/D/MSG/CNO WASHINGTON DC/091738ZJAN09//

NARR/ REF A IS NAVADMIN 050/09, SRB AWARD LEVELS. REF B IS
 OPNAVINST 1160.8A, SRB PROGRAM INSTRUCTION. REF C IS NAVADMIN
 006/09, SELECTIVE REENLISTMENT POLICY CHANGE. REF D IS NAVADMIN
 007/09, CONTROL OF CONDITIONAL SHORT TERM EXTENSIONS.//

RMKS/1. THIS NAVADMIN ANNOUNCES REVISED SELECTIVE REENLISTMENT
 BONUS (SRB) AWARD LEVELS FOR THE ACTIVE COMPONENT AND SUPERSEDES
 REF A. RESERVE COMPONENT FULL TIME SUPPORT (FTS) WILL CONTINUE TO
 FOLLOW AWARD LEVELS PRESCRIBED IN REF A.

2. DUE TO RETENTION IN THE FORCE AT LEVELS HIGHER THAN SEEN OVER
 THE PAST TEN YEARS, WE ARE PROJECTED TO MEET OUR REQUIRED NUMBERS OF
 PERSONNEL WITH CRITICAL SKILLS THIS FISCAL YEAR. THEREFORE, WE ARE
 REDUCING SRB LEVELS. REVISED AWARD LEVELS FOR THOSE NEC'S STILL TO
 RECEIVE SRB ARE LISTED BELOW. THE REDUCTIONS TO MULTIPLES AND
 CEILINGS APPLIED TO NON-NUCLEAR RATINGS/NEC'S ARE EFFECTIVE AS OF 01
 MAY 2009. THIS DATE WAS CHOSEN TO ALLOW SAILORS AN OPPORTUNITY TO
 REQUEST A RESERVATION BEFORE THE LOWER LIMIT TAKES EFFECT. NUCLEAR
 RATING/NEC AWARD LEVELS WILL BE EFFECTIVE AS OF 11 MAY 2009. ALL
 SELECTIVE REENLISTMENT AWARD LEVELS NOT LISTED ARE REDUCED TO OR
 REMAIN AT ZERO.

3. INFORMATION ON DECREASED AWARD LEVELS. SAILORS IN NON-NUCLEAR
 SKILLS IN WHICH THE SRB AWARD LEVEL IS BEING REDUCED OR TERMINATED,
 AND WHO HAVE A NAVY PERSONNEL COMMAND (NPC) APPROVAL MESSAGE, OR A
 PENDING PRECERT WITH PERS 811 FOR A REENLISTMENT DATE AFTER 30 APRIL
 2009, MUST RESUBMIT THE REQUEST FOR A NEW REENLISTMENT DATE OF 30
 APRIL 2009 OR EARLIER TO BE ELIGIBLE FOR THE HIGHER AWARD LEVEL,
 PROVIDED THEIR EAOS IS NOT LATER THAN 8 JUNE 2009 (90 DAYS FOLLOWING
 THE EFFECTIVE DATE OF THIS MESSAGE AS DESCRIBED IN REF C). THIS EAOS
 RESTRICTION, I.E., EAOS MUST BE ON OR BEFORE 8 JUNE 2009, ALSO
 APPLIES IN THE CASE OF A SAILOR WHOSE SRB AWARD LEVEL HAS DECREASED
 (OR BEEN TERMINATED) BUT WHO DID NOT ALREADY POSSESS AN APPROVAL
 MESSAGE OR PRECERT FROM PERS 811. A SAILOR MUST MEET ALL ELIGIBILITY
 CRITERIA UNDER PARA 10 FOR THE NEW, OR REQUESTED, DATE OF
 REENLISTMENT. THE ONLY EXCEPTIONS TO THIS ARE OUTLINED IN REF B,
 PARA 12.A AND REF C, PARA 4.

4. THE FOLLOWING NON-NUCLEAR SELECTIVE REENLISTMENT BONUS AWARD
 LEVEL REDUCTIONS ARE EFFECTIVE 1 MAY 2009. ALL CEILINGS HAVE BEEN
 REDUCED. A "-" SYMBOL PRECEDING AN AWARD LEVEL INDICATES A DECREASE
 TO THAT AWARD LEVEL FOR THAT SPECIFIC ZONE. ALL SELECTIVE
 REENLISTMENT AWARD LEVELS NOT LISTED BELOW ARE REDUCED TO OR REMAIN
 AT ZERO EFFECTIVE 1 MAY 2009:

45,000 DOLLAR AWARD CEILING

RATING	NEC	ZONE A	ZONE B	ZONE C	NOTES
AWR/S	7815	2.0	-0.0	0.0	
CTI	9209	-2.0	-2.0	2.0	1, 2
CTI	9216	-2.0	-2.0	2.0	1, 2
EM	4675	0.5	-0.0	0.0	

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FCA	1107	-1.0	0.0	0.0
FCA	1115	-1.0	0.0	0.0
FCA	1119	-1.0	0.0	0.0
FCA	1143	-1.0	0.0	0.0
FCA	1144	-1.0	0.0	0.0
FCA	1148	-1.0	0.0	0.0
FCA	1318	-1.0	0.0	0.0
FCA	1322	-1.0	0.0	0.0
FCA	1331	0.5	0.0	0.0
FCA	1335	0.5	0.0	0.0
FCA	1336	-1.0	0.0	0.0
FCA	1337	-1.0	0.0	0.0
FCA	1339	-1.0	0.0	0.0
FCA	1340	-1.0	0.0	0.0
FCA	1341	-1.0	0.0	0.0
FCA	1342	-1.0	0.0	0.0
FCA	1343	-1.0	0.0	0.0
FCA	1344	-1.0	0.0	0.0
FCA	1350	-1.0	0.0	0.0
FCA	1351	-1.0	0.0	0.0
FCA	1352	-1.0	0.0	0.0
FCA	1355	-1.0	0.0	0.0
FCA	1360	-1.0	0.0	0.0
FCA	1361	-1.0	0.0	0.0
FCA	1362	-1.0	0.0	0.0
FCA	1365	-1.0	0.0	0.0
ND	5343	-2.5	-1.0	0.0

60,000 DOLLAR AWARD CEILING

RATING	NEC	ZONE A	ZONE B	ZONE C	NOTES
HM	8403	0.0	5.0	0.0	
HM	8427	5.0	4.0	2.0	
ND	5341	0.0	0.0	-2.5	
ND	5342	-2.5	-2.5	-1.5	
SB	5352	-2.5	-2.0	0.0	

75,000 DOLLAR AWARD CEILING

RATING	NEC	ZONE A	ZONE B	ZONE C	NOTES
EOD	5333	-7.0	-6.0	0.0	
EOD	5335	-7.0	-6.5	-6.5	
EOD	5337	0.0	-8.0	-8.0	
HM	8403	0.0	0.0	5.0	
SB	5352	0.0	0.0	-3.0	
SO	5326	-5.0	-7.0	-6.0	

5. AS DESCRIBED IN REF A, THE FOLLOWING NUCLEAR SELECTIVE REENLISTMENT BONUS AWARD LEVEL REDUCTIONS ARE EFFECTIVE 11 MAY 2009. A "-" SYMBOL PRECEDING AN AWARD LEVEL INDICATES A DECREASE TO THAT AWARD LEVEL FOR THAT SPECIFIC ZONE.

60,000 DOLLAR AWARD CEILING

RATING	NEC	ZONE A	ZONE B	ZONE C	NOTES
NUC	3384	4.5	5.5	0.0	3
NUC	3394	4.5	5.5	0.0	3

75,000 DOLLAR AWARD CEILING

RATING	NEC	ZONE A	ZONE B	ZONE C	NOTES
NUC	3356	-6.5	-6.5	0.0	3
NUC	3366	-6.5	-6.5	0.0	3

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NUC	3386	-6.0	-5.0	0.0	3
NUC	3396	-6.0	-5.0	0.0	3
NUC	3354	-5.0	-5.5	0.0	3
NUC	3364	-5.0	-5.5	0.0	3
NUC	3353	-6.5	-6.5	0.0	3
NUC	3363	-6.5	-6.5	0.0	3
NUC	3383	-6.5	-6.5	0.0	3
NUC	3393	-6.5	-6.5	0.0	3
NUC	3355	-6.5	-6.5	0.0	3
NUC	3365	-6.5	-6.5	0.0	3
NUC	3385	-6.5	-6.5	0.0	3
NUC	3395	-6.5	-6.5	0.0	3

6. NOTES

(1) THE SRB FOR THIS RATING NEC IS TIED TO AN INCUMBENT BILLET OR TO ORDERS NEGOTIATED FOR THE NEXT BILLET. COMMANDS MUST VERIFY THE MEMBER IS CURRENTLY IN, OR HAS ORDERS TO, A BILLET REQUIRING THIS NEC AND ANNOTATE THIS VERIFICATION IN THE COMMENTS SECTION OF THE PRECERT REQUEST, IF REENLISTMENT FOR AN SRB IS INTENDED TO FILL NAVY REQUIREMENTS FOR SPECIFIC SKILL SETS TIED TO THESE BILLETS.

(2) AN SRB APPROVAL FOR ALL CRYPTOLOGIC TECHNICIANS WILL BE CONTINGENT UPON MEMBER HAVING A CURRENT SINGLE SCOPE BACKGROUND INVESTIGATION (SSBI), AN ACTIVE SSBI OR RECENT SUBMISSION OF AN SSBI PACKAGE. COMMANDS MUST VERIFY THE MEMBER HAS A CURRENT SSBI ACTIVE SSBI, OR HAS SUBMITTED AN SSBI PACKAGE AND MAKE NOTE OF THIS IN THE COMMENTS SECTION OF THE PRECERT REQUEST.

(3) REENLISTMENT COMPENSATION FOR ZONE C NUCLEAR TRAINED PERSONNEL HOLDING A NUCLEAR SUPERVISOR NEC SHALL BE PROVIDED UNDER THE ENLISTED SUPERVISOR RETENTION PAY PROGRAM (ESRP) PER NAVADMIN 159/06 OR CURRENT. NECS 3359 AND 3389 ARE INACTIVE NECS. MEMBERS HOLDING THESE NECS MAY REENLIST AT THE AWARD LEVEL SPECIFIED FOR THE LAST ACTIVE NEC HELD.

7. REF C ANNOUNCED NEW SRB POLICIES ON THE EARLY REENLISTMENT WINDOW. REF D ANNOUNCED CHANGES IN POLICIES ON SHORT TERM EXTENSIONS. THERE HAVE BEEN SEVERAL POLICY CHANGES OVER THE PAST FEW MONTHS AND IT IS IMPERATIVE EVERY SAILOR AND THEIR CHAIN OF COMMAND READ AND UNDERSTAND THESE CHANGES AND THE SUBSEQUENT IMPACTS TO THEIR CAREER DECISIONS. THIS WILL REDUCE INTERRUPTIONS IN PAY AND HELP MAXIMIZE TIMELINESS OF SRB PROCESSING.

8. THE FOLLOWING GUIDANCE IS PROVIDED ON NAVY ENLISTED CLASSIFICATION (NEC) SPECIFIC SRB AND LATERAL CONVERSIONS. ACCEPTANCE OF AN NEC-SPECIFIC SRB CONTRACT INDICATES AN AGREEMENT BETWEEN THE SAILOR AND NAVY TO UTILIZE SKILLS ATTRIBUTED TO THE NEC DURING THE SAILOR'S ENLISTMENT TO MEET FLEET READINESS REQUIREMENTS. IN SUBSEQUENT TOURS, A SAILOR MUST BE WILLING TO BE DETAILED DURING THE NORMAL PROJECTED ROTATION DATE WINDOW TO AN AVAILABLE BILLET WITHIN THE SRB CONTRACTED NEC, CONSISTENT WITH SEA-SHORE FLOW REQUIREMENTS. LATERAL CONVERSIONS MUST FOLLOW REF B, PARA 12.D. LATERAL CONVERSION REQUESTS WILL NOT BE PROCESSED MORE THAN NINE MONTHS BEFORE THE EXPIRATION OF ACTIVE OBLIGATED SERVICE (EAOS). CONVERSIONS TO A RATE WITH A LOWER AWARD LEVEL WILL NOT BE APPROVED.

9. PERFORM-TO-SERVE (PTS) REQUIREMENTS. AN SRB REQUEST FOR A SAILOR WHO REQUIRES PTS APPROVAL MUST BE SUBMITTED AFTER THE SAILOR HAS BEEN OFFICIALLY NOTIFIED OF PTS APPROVAL. THE STATUS OF PTS APPROVAL MAY BE VIEWED THROUGH OPINS IN THE ESTIMATED DATE OF LOSS TO NAVY (EDLN) FIELD OF THE I31 SCREEN.

10. REENLISTMENT PROCEDURES. SAILORS MAY REQUEST TO REENLIST EARLY FOR SRB SO LONG AS THEIR EAOS IS WITHIN THE CURRENT FISCAL YEAR AND THEIR HARD EAOS IS NOT LATER THAN 90 DAYS FROM THE REQUESTED DATE OF REENLISTMENT. SEE REF B, PARA 12.A AND REF C, PARA 4 FOR EXCEPTIONS TO THIS POLICY. OTHER POLICIES AND ADMINISTRATIVE PROCEDURES IN REFS A AND B AND THE DEFENSE JOINT MILITARY PAY SYSTEM (DJMS) PROCEDURES TRAINING GUIDE REMAIN IN EFFECT. IT IS RECOMMENDED

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SAILORS REENLIST AS CLOSE AS POSSIBLE TO THEIR EAOS TO PRESERVE THE MAXIMUM VALUE OF THEIR SRB PAYMENT. BECAUSE SRB IS CALCULATED BASED ON THE NUMBER OF MONTHS FOR WHICH A SAILOR REENLISTS BEYOND THEIR CURRENT EAOS, REENLISTING EARLY REDUCES THE SRB PAYMENT.

11. OBLIGATED SERVICE TO TRAIN (OTT) AND THEN REENLIST. SEE REF B, PARA 12.E. FOR OTT GUIDANCE. REQUESTS ARE TO BE SUBMITTED TO PERS-811 VIA NAVPERS 1306/7, ENLISTED PERSONNEL ACTION REQUEST. A COPY OF THE AUTHORIZATION MESSAGE SHOULD BE RETAINED IN THE FIELD SERVICE JACKET OR BY THE SAILOR UNTIL THE SRB REENLISTMENT ON GRADUATION DAY FROM THE COURSE OF INSTRUCTION. USE CODE 1CC (1RC FOR FTS) FOR OTT SRB REQUESTS IN OPINS.

12. COMMAND RESPONSIBILITIES AND PROCEDURES.

A. COMMANDS MUST SUBMIT SRB REQUESTS VIA OPINS 35-120 DAYS IN ADVANCE OF THE SAILOR'S EAOS OR REENLISTMENT DATE TO ENSURE THE APPROVAL OR DISAPPROVAL MESSAGE WILL REACH THE SAILOR'S COMMAND AND THE DEFENSE FINANCE AND ACCOUNTING SERVICE (DFAS) BEFORE THE REENLISTMENT DATE. TIMELINESS IS CRITICAL BECAUSE THE APPROVED PRECERT NOTIFIES THE DJMS OF THE SAILOR'S INTENT TO REENLIST, PREVENTS INTERRUPTION OF PAY, AND ENSURES THE INITIAL SRB PAYMENT POSTS TO THE SAILOR'S ACCOUNT. ANY CHANGES TO THE APPROVAL MAY CAUSE ERRORS AND SLOW PAYMENTS. AS A RESULT, CHANGES SHOULD BE PREVENTED. REQUESTS SUBMITTED LESS THAN 35 DAYS PRIOR TO THE REENLISTMENT DATE WITHOUT SUBSTANTIAL JUSTIFICATION WILL BE REJECTED. SAILORS MUST HAVE APPROVED PRECERTS BEFORE REENLISTING, THOUGH THEY MAY WAIT UNTIL THEIR EAOS TO REENLIST. THE SERVICING PERSONNEL OFFICE IS RESPONSIBLE FOR VERIFYING THE REENLISTMENT, POSTING THE CONTRACT AND RELEASING THE FIRST PAYMENT.

B. COMMANDS INITIATING SRB PRECERTS MUST ENSURE ALL OF THE DATA INCLUDED IN THE PRECERT REQUEST IS CORRECT AND THE SAILOR IS ELIGIBLE TO REENLIST FOR THE REQUESTED SRB. THE SRB REQUEST SHALL NOT BE ENTERED INTO OPINS UNTIL THE COMMANDING OFFICER HAS APPROVED THE REENLISTMENT REQUEST.

C. A SAILOR WITH AN APPROVED PRECERT WHO DOES NOT REENLIST ON THE DATE OR FOR THE TERM SPECIFIED ON THE PRECERT MESSAGE MUST HAVE THEIR COMMAND CONTACT PERS-811D TO INITIATE A REENLISTMENT CANCELLATION TO AVOID PLACING THE SAILOR IN AN OVERPAID STATUS.

13. INOPERATIVE EXTENSIONS. A MAXIMUM OF 24 MONTHS OF INOPERATIVE EXTENSION TIME WILL NOT COUNT AGAINST THE CALCULATION OF A SAILOR'S SRB PROVIDED THE REENLISTMENT IS FOR GREATER THAN THE PERIOD OF THE INOPERATIVE EXTENSION PLUS 24 MONTHS DAY-FOR-DAY. THIS CALCULATION IS PERFORMED AUTOMATICALLY BY PERS 811. LOCAL COMMANDS ARE NOT AUTHORIZED TO CANCEL EXTENSIONS FOR THE PURPOSE OF IMMEDIATE SRB REENLISTMENTS.

14. PRECERT REQUIREMENTS. THE FOLLOWING ARE REQUIRED WHEN SUBMITTING PRECERT REQUESTS:

A. TO VALIDATE AN INOPERATIVE EXTENSION OF ENLISTMENT AND EXPEDITE PROCESSING OF AN SRB REQUEST, INCLUDE THE FOLLOWING IN THE REMARKS PARAGRAPH OF THE REQUEST: TERM, NARRATIVE REASON, AUTHORITY, AND EXECUTION DATE OF ALL INOPERATIVE EXTENSIONS. FAILURE TO VERIFY EXTENSIONS WILL CAUSE PROCESSING DELAYS AND MAY RESULT IN REJECTION OF THE REQUEST OR AN APPROVAL AT A LOWER AMOUNT.

B. A CONDITIONAL EXTENSION OF ENLISTMENT (ANY EXTENSION LESS THAN 24 MONTHS) MUST MEET THE REASONS AND TERMS SPECIFIED IN MILPERSMAN 1160-040 AND REFS A AND D, AND MUST BE APPROVED BY PERS-811. SAILORS MUST OBTAIN AN APPROVAL FOR EXTENSION FROM PERS-811 IN ORDER TO MINIMIZE THE POTENTIAL FOR LOSS OF SRB ELIGIBILITY.

C. PERSONNEL IN A CLOSED LOOP NEC CAN REENLIST BY THE NEC ONLY.

15. LITTORAL COMBAT SHIP (LCS) GUIDANCE. SAILORS ASSIGNED TO LCS PLATFORMS OR WITH ORDERS TO AN LCS PLATFORM WHO POSSESS AN NEC SPECIFICALLY REQUIRED FOR LCS ASSIGNMENT (I.E., HYBRID SAILORS) ARE AUTHORIZED TO REENLIST FOR THE MORE LUCRATIVE SRB-ELIGIBLE NEC, REGARDLESS OF ASSIGNED RATING.

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16. POINT OF CONTACT FOR A SAILOR WHO HAS REENLISTED AND HAS NOT RECEIVED THEIR SRB PAYMENT, OR HAS QUESTIONS CONCERNING THE TAXATION OF THEIR SRB AND ANNUAL INSTALLMENTS, IS THE SAILOR'S SERVICING PAY OFFICE OR PSD/CSD. SRB TAX INFO IS ALSO DISCUSSED IN DODFMR VOL 7A, CH 44, TABLE 44-1, RULE 7. THE POINT OF CONTACT FOR A SAILOR WITH QUESTIONS REGARDING THE SRB PROGRAM IS THEIR COMMAND CAREER COUNSELOR (CCC). FOR TECHNICAL QUESTIONS OR CLARIFICATIONS, CCCS, NOT THE INDIVIDUAL SAILORS, ARE ENCOURAGED TO CONTACT PERS-811D AT (901) 874-2526/DSN 882, FAX (901) 874-2623/DSN 882 OR E-MAIL AT ETC(SW/AW) MCCANN AT SCOTT.MCCANN(AT)NAVY.MIL OR MR. FRANK PALOMO AT FRANCISCO.PALOMO(AT)NAVY.MIL.
17. WE WILL CONTINUE TO ASSESS RETENTION BEHAVIOR AND ADJUST SRB AWARD LEVELS ACCORDINGLY.
18. RELEASED BY VADM MARK FERGUSON, N1.//
BT
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NNNN

Question. Mr. Barnum, can you provide the Committee with a complete list of all recruitment and retention bonuses for each MOS? Can you provide the average bonus of each MOS?

Answer. (Defer Retention Bonus Issues to N13)

The effective Enlistment Bonus (EB) award level message determines the amount of EB that may be awarded and may be accompanied with the Navy College Fund (NCF). The authorization in effect for a particular Recruit is determined by the date the Recruit enters the Delayed Entry Program (DEP) and can vary based on ship month. Navy continually reviews the recruiting/enlistment bonus programs and adjusts bonuses and incentives accordingly with the needs of the Navy; therefore the average bonus of each rating depends wholly on a Recruit's entry into the DEP and the effective EB authorization message. Those ratings not listed below have an EB of \$0; however, they can be eligible for other enlistment programs including the Loan Repayment Program, College First, Accelerate to Excellence and Language Proficiency for eligible foreign languages. Additionally, Navy offers a Physical Screening Test EB for Special Warfare, Special Operations and Air Rescue rates.

Rating-Program	Ship months	EB	EB-NCF Combo
Aviation Electronics Computer Field-FTS	APR-SEP	\$6,000	
Avionics-FTS	APR-SEP	8,000	
Cryptologic Technician Interpretive-ATF ...	APR-SEP	20,000	\$13,000/350 per month.
Information Technician-SG	APR-SEP	15,000	
Musician-SG	APR-SEP	15,000	
Submarine Electronics Computer Field-5YO.	APR-SEP	10,000	
Nuclear Field	NOV-JAN	23,000	\$12,000/350 per month.
	FEB-MAY	25,000	\$13,000/350 per month.
	JUN-OCT	21,000	\$11,000/350 per month.
Air Rescue-ATF	OCT-SEP	25,000	
Explosive Ordnance Disposal-ATF	OCT-SEP	40,000	
Navy Diver-ATF	OCT-SEP	25,000	
Special Boats-ATF	OCT-SEP	25,000	
Special Operations-ATF	OCT-SEP	40,000	
FTS-Full Time Support.			
ATF-Advanced Technical Field.			
SG-School Guarantee.			
5YO-5 Year Obligation.			

FY09 Program Codes

PEF Codes	EB	Program	TOE	Notes
AE		Aviation Support	4	
AF		Aviation Mechanic	5	
AG		Aircrew	5	
AJ		Aviation Operations	5	
B5		Managerial Option	4	
B6		Ground Option	4	
B7		Electronics Option	4	
B8		Mechanical Option	4	
BA		Aviation Electronics Tech	5	
BX		Data System	5	
BY/F5	\$15,000	Electronics Maintenance	5	
CA/F6	\$10,000	Transportation	4	
CB		Legal and Administration	4	
CC/F7	\$10,000	Supply and Accounting	4	
CD		Equipment and Vehicle Repair	4	
CE		Combat Support	4	
CF		Ordnance and Metal Works	4	
CG		Public Affairs	4	
CH		Media	5	
CJ		Logistics	4	
CK/E4	\$6,000	Fire Direct and Control Specialists	4	
CL		Combat Vehicle Repair	4	
CM		Construction and Utilities	4	
CN		Service Management	4	
DB/F8	\$10,000	Command Control & Electrician	4	
DC/E9	\$25,000	Crypto Linguists	5	2,3
DD/F4	\$6,000	Intel	5	
DE		METOC Observer	5	
ET	\$5,000	FY09 Shipping Bonus	NA	2
F9	\$15,000	6 Year Infantry Program	6	
G1	\$7,500	5 Year Infantry Program	5	
G6		Food Service	4	
H1	\$12,000	Arabic Linguists	NA	
H2	\$4,000	Arabic Linguists	NA	
JK		4 Year MCCF	4	2
JL		5 Year MCCF	5	2
JM		6 Year MCCF	6	2
PR		Parachute Rigger (MOS 0451)	4	
U2 or U4 / M1	\$10,000	Music	4	
UH		Infantry	4	
UJ		NBC	4	
UT		Military Police and Corrections	5	
UV		Marine Security Forces	5	
UW		Marine Security Forces (PRP)	5	
UZ	\$10,000	Recon	4	

Notes

- 1 New Program for FY09
- 2 New EB code for FY09
- 3 Amt of \$ for EB changed for FY09

MOS	MOS DESCRIPTION	FY09 ZONE A BELOW E4	FY09 ZONE A ES AND E4	FY09 ZONE A ES ABOVE	AVG
0143 LM	CAREER RETENTION SPECIALIST	\$19,000	\$21,500	\$25,000	\$21,833
0151	ADMINISTRATION CLERK	\$9,000	\$10,000	\$11,500	\$10,167
0161	POSTAL CLERK	\$5,500	\$6,000	\$7,000	\$6,167
0211 LM	COUNTERINTELLIGENCE/HUMINT SPECIALIST	\$60,000	\$65,000	\$79,000	\$69,333
0231 LM	INTELLIGENCE SPECIALIST	\$60,000	\$65,000	\$79,000	\$69,333
0241 LM	IMAGERY ANALYSIS SPECIALIST	\$54,500	\$60,000	\$72,000	\$63,167
0261 LM	GEOGRAPHIC INTELLIGENCE SPECIALIST	\$60,000	\$69,000	\$79,000	\$69,333
0311	RIFLEMAN	\$29,000	\$33,500	\$38,500	\$33,667
0313	LAV CREWMAN	\$39,500	\$45,000	\$52,000	\$44,500
0321 LM	RECONNAISSANCE MAN	\$61,500	\$71,000	\$81,000	\$71,167
0331	MACHINE GUNNER	\$29,000	\$33,500	\$38,500	\$33,667
0341	MORTARMAN	\$29,000	\$33,500	\$38,500	\$33,667
0351	INFANTRY ASSAULT MAN	\$24,000	\$27,500	\$31,500	\$27,667
0352	ANTI-TANK MISSILE-MAN	\$46,000	\$50,000	\$61,000	\$53,333
0411	MAINTENANCE MANAGEMENT SPECIALIST	\$19,000	\$21,500	\$25,000	\$21,833
0431	LOGISTICS/EMBARKATION AND COMBAT SERVICE SUPPORT (CSS) SPECIALIST	\$22,500	\$25,500	\$29,500	\$25,833
0451	PARACHUTE RIGGER	\$53,000	\$61,000	\$70,000	\$61,333
0481	LANDING SUPPORT SPECIALIST	\$36,000	\$41,000	\$47,500	\$41,500
0511 LM	MAGTF PLANNING SPECIALIST	\$53,000	\$61,000	\$70,000	\$61,333
0612	FIELD WIREMAN	\$32,500	\$37,500	\$43,000	\$37,667
0613	CONSTRUCTION WIREMAN	\$10,500	\$12,000	\$13,500	\$12,000
0614	UNIT LEVEL CIRCUIT SWITCH (ULCS) OPERATOR/MAINTAINER	\$32,500	\$37,500	\$43,000	\$37,667
0621	FIELD RADIO OPERATOR	\$32,500	\$37,500	\$43,000	\$37,667
0622 LM	DIGITAL (MULTI-CHANNEL) WIDEBAND TRANSMISSION EQUIPMENT OPERATOR	\$19,000	\$21,500	\$25,000	\$21,833
0623 LM	TROPOSPHERIC SCATTER RADIO MULTI-CHANNEL EQUIPMENT OPERATOR	\$12,500	\$14,000	\$16,000	\$14,167
0627 LM	GROUND MOBILE FORCES SATCOM OPERATOR	\$39,500	\$45,000	\$52,000	\$44,500
0628 LM	RF-SATELLITE COMMUNICATIONS OPERATOR/MAINTAINER	\$49,500	\$57,000	\$65,500	\$57,333
0651 LM	DATA NETWORK SPECIALIST	\$42,500	\$49,000	\$56,500	\$49,333
0656 LM	TACTICAL NETWORK SPECIALIST	\$0	\$0	\$65,500	\$65,500
0689 LM	INFORMATION ASSURANCE TECHNICIAN	\$30,500	\$35,500	\$40,500	\$35,500
0842	FIELD ARTILLERY RADAR OPERATOR	\$41,000	\$47,000	\$54,000	\$47,333
0844	FIELD ARTILLERY FIRE CONTROL MAN	\$41,000	\$47,000	\$54,000	\$47,333
0847	ARTILLERY METEOROLOGICAL MAN	\$61,500	\$71,000	\$81,000	\$71,167
0861	FIRE SUPPORT MAN	\$7,000	\$8,000	\$9,000	\$8,000
1141	ELECTRICIAN	\$15,500	\$18,000	\$20,500	\$18,000
1142	ELECTRICAL EQUIPMENT REPAIR SPECIALIST	\$15,500	\$18,000	\$20,500	\$18,000
1161	REFRIGERATION MECHANIC	\$9,000	\$10,000	\$11,500	\$10,167
1171	HYGIENE EQUIPMENT OPERATOR	\$15,500	\$18,000	\$20,500	\$18,000
1316	METAL WORKER	\$15,500	\$18,000	\$20,500	\$18,000
1341	ENGINEER EQUIPMENT MECHANIC	\$15,500	\$18,000	\$20,500	\$18,000
1345	ENGINEER EQUIPMENT OPERATOR	\$19,000	\$21,500	\$25,000	\$21,833
1361	ENGINEER ASSISTANT	\$15,500	\$18,000	\$20,500	\$18,000

1371	COMBAT ENGINEER	\$27,500	\$31,500	\$36,000	\$31,667
1381	BULK FUEL SPECIALIST	\$19,000	\$21,500	\$25,000	\$21,833
1812	MTAI TANK CREWMAN	\$24,000	\$27,500	\$31,500	\$27,667
1833	ASSAULT AMPHIBIOUS VEHICLE (AAV) CREWMAN	\$30,500	\$35,500	\$40,500	\$35,500
2111	SMALL ARMS REPAIRER/TECHNICIAN	\$9,000	\$10,000	\$11,500	\$10,167
2131	TOWED ARTILLERY SYSTEMS TECHNICIAN	\$19,000	\$21,500	\$25,000	\$21,833
2141 LM	ASSAULT AMPHIBIOUS VEHICLE (AAV) REPAIRER/TECHNICIAN	\$27,500	\$31,500	\$36,000	\$31,667
2146	MAIN BATTLE TANK (MBT) REPAIRER/TECHNICIAN	\$29,500	\$35,000	\$42,000	\$45,500
2147	LIGHT ARMORED VEHICLE (LAV) REPAIRER/TECHNICIAN	\$29,000	\$33,500	\$38,500	\$33,667
2161	MACHINIST	\$17,000	\$19,500	\$22,500	\$19,667
2171	ELECTRO-OPTICAL ORDNANCE REPAIRER	\$27,500	\$31,500	\$36,000	\$31,667
2311	AMMUNITION TECHNICIAN	\$27,500	\$31,500	\$36,000	\$31,667
2336 LM	EXPLOSIVE ORDNANCE DISPOSAL TECHNICIAN	\$61,500	\$71,000	\$81,000	\$71,167
2621 LM	SPECIAL COMMUNICATIONS SIGNAL COLLECTION OPERATOR/ANALYST	\$42,500	\$49,000	\$56,500	\$49,333
2631 LM	ELECTRONIC INTELLIGENCE (ELINT) INTERCEPT OPERATOR/ANALYST	\$26,000	\$29,500	\$34,000	\$29,833
2651 LM	SPECIAL INTELLIGENCE SYSTEM ADMINISTRATOR/COMMUNICATOR	\$41,000	\$47,000	\$54,000	\$47,333
2671 LM	MIDDLE EAST CRYPTOLOGIC LINGUIST	\$56,500	\$65,000	\$74,500	\$65,333
2673 LM	ASIA-PACIFIC CRYPTOLOGIC LINGUIST	\$56,500	\$65,000	\$74,500	\$65,333
2674 LM	EUROPEAN (WEST) CRYPTOLOGIC LINGUIST	\$42,500	\$49,000	\$56,500	\$49,333
2676 LM	EUROPEAN II (EAST) CRYPTOLOGIC LINGUIST	\$41,000	\$47,000	\$54,000	\$47,333
2821 LM	TECHNICAL CONTROLLER MARINE	\$58,000	\$67,000	\$76,500	\$67,167
2822	ELECTRONIC SWITCHING EQUIPMENT TECHNICIAN	\$51,000	\$59,000	\$67,500	\$59,167
2831	AN/TRC-170 TECHNICIAN	\$56,500	\$65,000	\$74,500	\$65,333
2834 LM	SATELLITE COMMUNICATIONS (SATCOM) TECHNICIAN	\$60,000	\$69,000	\$79,000	\$69,333
2844	GROUND COMMUNICATIONS ORGANIZATIONAL REPAIRER	\$47,500	\$55,000	\$63,000	\$55,167
2846	GROUND RADIO INTERMEDIATE REPAIRER	\$41,000	\$47,000	\$54,000	\$47,333
2847	TELEPHONE SYSTEMS/PERSONAL COMPUTER INTERMEDIATE REPAIRER	\$44,000	\$51,000	\$58,500	\$51,167
2871 LM	TEST MEASUREMENT AND DIAGNOSTIC EQUIPMENT TECHNICIAN	\$41,000	\$47,000	\$54,000	\$47,333
2887 LM	ARTILLERY ELECTRONICS TECHNICIAN	\$58,000	\$67,000	\$76,500	\$67,167
3043	SUPPLY ADMINISTRATION AND OPERATIONS CLERK	\$29,000	\$33,500	\$38,500	\$33,667
3044 LM	CONTRACT SPECIALIST	\$27,500	\$31,500	\$36,000	\$31,667
3381	FOOD SERVICE SPECIALIST	\$19,000	\$21,500	\$25,000	\$21,833
3432	FINANCE TECHNICIAN	\$26,000	\$29,500	\$34,000	\$29,833
3451 LM	FISCAL/BUDGET TECHNICIAN	\$27,500	\$31,500	\$36,000	\$31,667
3521	AUTOMOTIVE ORGANIZATIONAL MECHANIC	\$24,000	\$27,500	\$31,500	\$27,667
3531	MOTOR VEHICLE OPERATOR	\$22,500	\$25,500	\$29,500	\$25,833
3533	LOGISTICS VEHICLE SYSTEM OPERATOR	\$29,000	\$33,500	\$38,500	\$33,667
4133 LM	MORALE, WELFARE, RECREATION (MWR) SPECIALIST	\$51,000	\$59,000	\$67,500	\$59,167
4341 LM	COMBAT CORRESPONDENT	\$34,000	\$39,000	\$45,000	\$39,333
4421	LEGAL SERVICES SPECIALIST	\$15,500	\$18,000	\$20,500	\$18,000
4612 LM	COMBAT LITHOGRAPHER	\$42,500	\$49,000	\$56,500	\$49,333
4641 LM	COMBAT PHOTOGRAPHER	\$42,500	\$49,000	\$56,500	\$49,333
4671 LM	COMBAT VIDEOGRAPHER	\$47,500	\$55,000	\$63,000	\$55,167
5524	MUSICIAN	\$46,000	\$53,000	\$61,000	\$53,333
5711	NUCLEAR BIOLOGICAL AND CHEMICAL DEFENSE (NBCCD) SPECIALIST	\$27,500	\$31,500	\$36,000	\$31,667
5811 LM	MILITARY POLICE	\$29,000	\$33,500	\$38,500	\$33,667
5821 LM	CRIMINAL INVESTIGATOR CID AGENT	\$29,000	\$33,500	\$38,500	\$33,667
5831 LM	CORRECTIONAL SPECIALIST	\$24,000	\$27,500	\$31,500	\$27,667

5939 LM	AVIATION COMMUNICATION SYSTEMS TECHNICIAN	\$60,000	\$69,000	\$79,000	\$69,333
5942	AVIATION RADAR REPAIRER	\$14,000	\$16,000	\$18,000	\$16,000
5974	TACTICAL DATA SYSTEMS ADMINISTRATOR (TDSA)	\$39,500	\$45,000	\$52,000	\$45,500
5979	TACTICAL AIR OPERATIONS MODULE/AIR DEFENSE TECHNICIAN	\$34,000	\$39,000	\$45,000	\$39,333
6042	INDIVIDUAL MATERIAL READINESS LIST (IMRL) ASSET MANAGER	\$22,500	\$26,500	\$29,500	\$25,833
6048	AIRCRAFT MAINTENANCE ADMINISTRATION SPECIALIST	\$27,500	\$31,500	\$36,000	\$31,667
6048	FLIGHT EQUIPMENT TECHNICIAN	\$24,000	\$27,500	\$31,500	\$27,667
6082	AIRCRAFT INTERMEDIATE LEVEL HYDRAULIC/PNEUMATIC MECHANIC	\$22,500	\$25,500	\$29,500	\$25,833
6072	AIRCRAFT MAINTENANCE SUPPORT EQUIPMENT ELECTRICIAN/REFRIGERATION MECHANIC	\$22,500	\$25,500	\$29,500	\$25,833
6073	AIRCRAFT MAINTENANCE SUPPORT EQUIPMENT ELECTRICIAN/REFRIGERATION MECHANIC	\$22,500	\$25,500	\$29,500	\$25,833
6074 LM	CRYOGENICS EQUIPMENT OPERATOR	\$7,000	\$9,000	\$9,000	\$8,000
6092	AIRCRAFT INTERMEDIATE LEVEL STRUCTURES MECHANIC	\$9,000	\$10,000	\$11,500	\$10,167
6112	HELICOPTER MECHANIC, CH-46	\$36,000	\$41,000	\$47,500	\$41,500
6113	HELICOPTER MECHANIC, CH-53	\$41,000	\$47,000	\$54,000	\$47,333
6114	HELICOPTER MECHANIC, UH/AH-1	\$36,000	\$41,000	\$47,500	\$41,500
6116	TILT ROTOR MECHANIC, MV-22	\$9,000	\$10,000	\$11,500	\$10,167
6122	HELICOPTER POWER PLANTS MECHANIC, T-58	\$22,500	\$25,500	\$29,500	\$25,833
6123	HELICOPTER POWER PLANTS MECHANIC, T-64	\$47,500	\$55,000	\$63,000	\$55,167
6124	HELICOPTER/TILT ROTOR DYNAMIC COMPONENTS MECHANIC	\$9,000	\$10,000	\$11,500	\$10,167
6152	HELICOPTER AIRFRAME MECHANIC, CH-46	\$9,000	\$10,000	\$11,500	\$10,167
6153	HELICOPTER AIRFRAME MECHANIC, CH-53	\$29,000	\$33,500	\$38,500	\$33,667
6154	HELICOPTER AIRFRAME MECHANIC, UH/AH-1	\$34,000	\$39,000	\$45,000	\$39,333
6156 LM	TILT ROTOR AIRFRAME MECHANIC, MV-22	\$14,000	\$16,000	\$18,000	\$16,000
6172	HELICOPTER CREW CHIEF, CH-46	\$41,000	\$47,000	\$54,000	\$47,333
6173	HELICOPTER CREW CHIEF, CH-53	\$39,500	\$45,000	\$52,000	\$45,500
6174	HELICOPTER CREW CHIEF, UH-1	\$53,000	\$61,000	\$70,000	\$61,333
6176 LM	TILT ROTOR CREW CHIEF, MV-22	\$27,500	\$31,500	\$36,000	\$31,667
6212	FIXED-WING AIRCRAFT MECHANIC, AV-8/TAV-8	\$19,000	\$21,500	\$25,000	\$21,833
6213	FIXED-WING AIRCRAFT MECHANIC, EA-6	\$56,500	\$65,000	\$74,500	\$65,333
6214	UNMANNED AERIAL VEHICLE (UAV) MECHANIC	\$22,500	\$25,500	\$29,500	\$25,833
6216	FIXED-WING AIRCRAFT MECHANIC, KC-130	\$29,000	\$33,500	\$38,500	\$33,667
6217	FIXED-WING AIRCRAFT MECHANIC, F/A-18	\$27,500	\$31,500	\$36,000	\$31,667
6222	FIXED-WING AIRCRAFT POWER PLANTS MECHANIC, F-402	\$20,500	\$23,500	\$27,000	\$23,667
6223	FIXED-WING AIRCRAFT POWER PLANTS MECHANIC, J-52	\$19,000	\$21,500	\$25,000	\$21,833
6226	FIXED-WING AIRCRAFT POWER PLANTS MECHANIC, T-56	\$30,500	\$35,500	\$40,500	\$35,500
6227	FIXED-WING AIRCRAFT POWER PLANTS MECHANIC, F-404	\$32,500	\$37,500	\$43,000	\$37,667
6252	FIXED-WING AIRCRAFT AIRFRAME MECHANIC, AV-8/TAV-8	\$5,500	\$6,000	\$7,000	\$6,167
6253	FIXED-WING AIRCRAFT AIRFRAME MECHANIC, EA-6	\$20,500	\$23,500	\$27,000	\$23,667
6256	FIXED-WING AIRCRAFT AIRFRAME MECHANIC, KC-130	\$46,000	\$53,000	\$61,000	\$53,333
6257	FIXED-WING AIRCRAFT AIRFRAME MECHANIC, F/A-18	\$17,000	\$19,500	\$22,500	\$19,667
6276	FIXED-WING AIRCRAFT CREW CHIEF, KC-130	\$12,500	\$14,000	\$16,000	\$14,167
6282	FIXED-WING AIRCRAFT SAFETY EQUIPMENT MECHANIC, AV-8/TAV-8	\$5,500	\$6,000	\$7,000	\$6,167
6283	FIXED WING AIRCRAFT SAFETY EQUIPMENT MECHANIC, EA-6	\$26,000	\$30,000	\$34,500	\$30,500
6286	FIXED-WING AIRCRAFT SAFETY EQUIPMENT MECHANIC, KC-130	\$17,000	\$19,500	\$22,500	\$19,667
6287	FIXED-WING AIRCRAFT SAFETY EQUIPMENT MECHANIC, F/A-18	\$12,500	\$14,000	\$16,000	\$14,167
6312	AIRCRAFT COMMUNICATIONS/NAVIGATION/WEAPON SYSTEMS TECHNICIAN, AV-8	\$5,500	\$6,000	\$7,000	\$6,167
6313 LM	AIRCRAFT COMMUNICATIONS/NAVIGATION/RADAR SYSTEMS TECHNICIAN, EA-6	\$30,500	\$35,500	\$40,500	\$35,500

6314	UNMANNED AERIAL VEHICLE (UAV) AVIONICS TECHNICIAN	\$61,500	\$71,000	\$81,000	\$71,167
6316	AIRCRAFT COMMUNICATIONS/NAVIGATION SYSTEMS TECHNICIAN, KC-130	\$36,000	\$41,000	\$47,500	\$41,500
6317	AIRCRAFT COMMUNICATIONS/NAVIGATION/WEAPON SYSTEMS TECHNICIAN, F/A-18	\$37,500	\$43,000	\$49,500	\$43,333
6322	AIRCRAFT COMMUNICATIONS/NAVIGATION/ELECTRICAL SYSTEMS TECHNICIAN, CH-46	\$32,500	\$37,500	\$43,000	\$37,667
6323	AIRCRAFT COMMUNICATIONS/NAVIGATION/ELECTRICAL SYSTEMS TECHNICIAN, CH-53	\$41,000	\$47,000	\$54,000	\$47,333
6324 LM	AIRCRAFT COMMUNICATIONS/NAVIGATION/ELECTRICAL/WEAPON SYSTEMS TECHNICIAN, U/AH-1	\$47,500	\$55,000	\$63,000	\$55,167
6326 LM	AIRCRAFT COMMUNICATIONS/NAVIGATION/ELECTRICAL/WEAPON SYSTEMS TECHNICIAN, V-22	\$51,000	\$59,000	\$67,500	\$59,167
6332	AIRCRAFT ELECTRICAL SYSTEMS TECHNICIAN, AV-8	\$44,000	\$51,000	\$58,500	\$51,167
6333	AIRCRAFT ELECTRICAL SYSTEMS TECHNICIAN, EA-6	\$41,000	\$47,000	\$54,000	\$47,333
6336	AIRCRAFT ELECTRICAL SYSTEMS TECHNICIAN, KC-130	\$24,000	\$27,500	\$31,500	\$27,667
6337	AIRCRAFT ELECTRICAL SYSTEMS TECHNICIAN, F/A-18	\$37,500	\$43,000	\$49,500	\$43,333
6386	AIRCRAFT ELECTRONIC COUNTERMEASURES SYSTEMS TECHNICIAN, EA-6B	\$47,500	\$55,000	\$63,000	\$55,167
6412	AIRCRAFT COMMUNICATIONS SYSTEMS TECHNICIAN, IMA	\$37,500	\$43,000	\$49,500	\$43,333
6432	AIRCRAFT ELECTRICAL/INSTRUMENT/FLIGHT CONTROL SYSTEMS TECHNICIAN, FIXED-WING, IMA	\$27,500	\$31,500	\$36,000	\$31,667
6433	AIRCRAFT ELECTRICAL/INSTRUMENT/FLIGHT CONTROL SYSTEMS TECHNICIAN, HELICOPTER, IMA	\$22,500	\$25,500	\$29,500	\$25,833
6463	RADAR SYSTEMS TEST STATION (RSTS) TECHNICIAN, IMA	\$26,000	\$29,500	\$34,000	\$29,833
6466	AIRCRAFT FORWARD LOOKING INFRARED/ELECTRO-OPTICAL TECHNICIAN, IMA	\$53,000	\$61,000	\$70,000	\$61,333
6467	CONSOLIDATED AUTOMATIC SUPPORT SYSTEM (CASS) TECHNICIAN, IMA	\$27,500	\$31,500	\$36,000	\$31,667
6483	AIRCRAFT ELECTRONIC COUNTERMEASURES SYSTEMS TECHNICIAN, FIXED-WING, IMA	\$14,000	\$16,000	\$18,000	\$16,000
6484	AIRCRAFT ELECTRONIC COUNTERMEASURES SYSTEMS TECHNICIAN, HELICOPTER, IMA	\$32,500	\$37,500	\$43,000	\$37,667
6492	AVIATION PRECISION MEASUREMENT EQUIPMENT/CALIBRATION AND REPAIR TECHNICIAN, IMA	\$17,000	\$19,500	\$22,500	\$19,667
6493	AVIATION METEOROLOGICAL EQUIPMENT TECHNICIAN, OMA/IMA	\$22,500	\$25,500	\$29,500	\$25,833
6531	AIRCRAFT ORDNANCE TECHNICIAN	\$22,500	\$25,500	\$29,500	\$25,833
6541	AVIATION ORDNANCE SYSTEMS TECHNICIAN	\$24,000	\$27,500	\$31,500	\$27,667
6672	AVIATION SUPPLY SPECIALIST	\$19,000	\$21,500	\$25,000	\$21,833
6694	AVIATION INFORMATION SYSTEMS (AIS) SPECIALIST	\$53,000	\$61,000	\$70,000	\$61,333
6842	METOC FORECASTER	\$14,000	\$16,000	\$18,000	\$16,000
7011	EXPEDITIONARY AIRFIELD SYSTEMS TECHNICIAN	\$24,000	\$27,500	\$31,500	\$27,667
7051	AVIATION OPERATIONS SPECIALIST	\$26,000	\$29,500	\$34,000	\$29,833
7212	AIRCRAFT RESCUE AND FIREFIGHTING SPECIALIST	\$29,000	\$33,500	\$38,500	\$33,667
7234	LOW ALTITUDE AIR DEFENSE (LAAD) GUNNER	\$61,500	\$71,000	\$81,000	\$71,167
7242	AIR CONTROL ELECTRONICS OPERATOR	\$61,500	\$71,000	\$81,000	\$71,167
7257	AIR TRAFFIC CONTROLLER	\$61,500	\$71,000	\$81,000	\$71,167
7314 LM	UNMANNED AERIAL VEHICLE (UAV) AIR VEHICLE OPERATOR	\$20,500	\$23,500	\$27,000	\$23,667
7372	TACTICAL SYSTEMS OPERATOR/MISSION SPECIALIST	\$44,000	\$51,000	\$58,500	\$51,167
7382	AIRBORNE RADIO OPERATOR/IN-FLIGHT REFUELING OBSERVER/LOADMASTER	\$56,500	\$65,000	\$74,500	\$65,333

Question. Admiral Ferguson, are there any MOSs that, even with bonuses, you still have a problem filing?

Answer. Yes. Nuclear operators and certain medical professionals continue to be a challenge.

Question. General Coleman, are there any MOSs that, even with bonuses, you are still having problems filling?

Answer. Yes. Although we have had tremendous reenlistment successes we still have some lateral move MOSs that may potentially fall short this FY. Two examples include 0211s (Counter Intel/Humint Specialists) and 2336s (Explosive Ordinance Disposal Technician).

FISCAL YEAR 2009 EXECUTION

Question. Admiral Ferguson, the Navy over-executed its end strength in fiscal year 2008 and continues to do so in fiscal year 2009, what factors are contributing to the over-execution of end strength and what steps will the Navy take to address this problem?

Answer. The economy has impacted the behavior of the force. We are seeing increased retention, as well as significantly reduced attrition. To meet Combatant Commander Individual Argumentation demand and reduce stress on the force, Secretary of the Navy approved a fiscal year 2009 end strength level above our current authorization. To maintain a balanced force in terms of seniority, experience, and skills, we have implemented a comprehensive force stabilization strategy. We have implemented, or will implement, a number of force shaping measures including time in grade waivers, reducing or eliminating selective reenlistment bonuses, performance-based continuation boards for enlisted personnel with greater than 20 years of service, and voluntary early separations. We have also reduced accessions and controlled the number of reenlistments and short-term extensions we allow.

Question. Admiral Ferguson, when can the Committee expect to see a reprogramming request to address the shortfall due to the Navy's over strength and how much will it be?

Answer. Navy is conducting a mid-year review of program execution and will assess our ability to reprogram funds. We have not determined the reprogramming amount, but anticipate preparing a proposal for OSD to support a summer submission to the Congress. Currently, the FY09 MPN shortfall is projected to be approximately \$350 million.

Question. Mr. Barnum, currently, what is the monthly "burn rate" for the Navy and Marine Corps' personnel costs?

Answer. The DoN monthly burn rates (in \$Millions) through February 2009 are:

MPN	\$2,159
RPN	151.9
MPMC	1,086
RPMC	49.1

Question. Mr. Barnum, when do you anticipate the Navy and Marine Corps' military personnel accounts will run out of money in FY 2009?

Answer. Projections based on expenditures through February 2009 for run out dates without the proposed FY2009 Overseas Contingency Operations Supplemental Budget (OCOSB):

MPN	6 September 2009.
RPN	22 September 2009.
MPMC	21 August 2009.
RPMC	12 September 2009.

SAILORS IN AFGHANISTAN

Question. The new Administration announced that it will send an additional 17,000 personnel to Afghanistan.

Admiral Ferguson, how many sailors are going?

Answer. It is yet to be determined which specific missions that Navy will be supporting are directly linked to the 17,000. Navy has agreed to support an additional ~61,600 requirements that are believed to be inclusive of the 17,000.

Question. General Coleman, how many of the 17,000 servicemembers being sent to Afghanistan are Marines?

Answer. Currently, there are approximately 3,300 Marines in Afghanistan. 2nd MEB will have approximately 10,100 Marines once fully established.

Question. General Coleman, of the Marines being sent, how many will be on their first and how many will be on their second tour?

Answer. The next rotation of units deploying to Afghanistan will deploy in November. These units will not stabilize for deployment until the May/June time frame. However, as an example, the typical deploying infantry battalion—46.4% of the Marines are on their first deployment; 39% are on a second deployment; and 14.6% are on a third or greater deployment. These percentages would generally be mirrored in other deploying units.

Question. Admiral Ferguson, do Sailors deploying to Afghanistan, train with the same equipment they will use when deployed?

Answer. The equipment used to train Operation Enduring Freedom bound Sailors is the same Ready For Issue/Organizational Clothing and Individual Equipment—initial issue for Iraq. Actual employment will depend on the mission in theater. Routinely theater asks for specific communication training based on equipment. Army has standard equipment in both Iraq and Afghanistan, absent some vehicle differences, the training is standard.

Question. General Coleman do Marines deploying to Afghanistan, train with the same equipment they will use when deployed?

Answer. Marines train with the same individual equipment that they will deploy with. They will 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. Admiral Ferguson, what sort of physical conditioning is done to prepare Sailors for deployment?

Answer. Sailors are required to have passed the current Physical Readiness Test. Once reporting to training, they conduct physical training daily as well as train with full battle gear, e.g., 1–2 mile hikes fully loaded.

Question. How is physical fitness maintained once Sailors are deployed?

Answer. In theater, it is the parent organization that is required to ensure physical readiness which Sailors must participate in.

Question. General Coleman, what sort of physical conditioning is done to prepare Marines for deployments? How is physical fitness maintained once Marines are deployed?

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 predeployment 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.

The Marine Corps measures basic fitness levels with two semi-annual tests: the Physical Fitness Test, consisting of pull-up, abdominal crunches and a three mile run, that assesses general fitness; and the Combat Fitness Test consisting of three events that more accurately assess battlefield physical capabilities such as repeatedly lifting ammunition boxes and sprinting while carrying a wounded comrade. Other mandatory Service programs that contribute considerably to every Marine's fitness include the Marine Corps Martial Arts Program and the requirement for periodic swimming requalifications.

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. Admiral Ferguson, how do Sailors prepare for high altitude operations such as those they will perform in Afghanistan?

Answer. There is no additional training to prepare Sailors for altitude extremes in Afghanistan.

Question. General Coleman, how do Marines prepare for high altitude operations such as those they will perform in Afghanistan?

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 20 Palms prior to deploying. Marine Embedded Training Teams (ETTs)

deploying to RC East in Afghanistan conduct their predeployment 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.

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

WEDNESDAY, MARCH 25, 2009.

COMBAT AIRCRAFT ACQUISITION

WITNESSES

VICE ADMIRAL DAVID ARCHITZEL, USN, PRINCIPAL DEPUTY, ASSISTANT SECRETARY OF THE NAVY, RESEARCH, DEVELOPMENT AND ACQUISITION

LIEUTENANT GENERAL MARK D. SHACKELFORD, MILITARY DEPUTY, OFFICE OF THE ASSISTANT SECRETARY OF THE AIR FORCE FOR ACQUISITION

OPENING STATEMENT OF MR. MURTHA

Mr. MURTHA. We will start the hearing. Let me welcome the two distinguished guests today. General Shackelford flew the first F-22, the first one to fly it. He was a younger fellow. He tells me it is a vast improvement. It took a long time to get out in the field. It was something we discussed before the hearing started, was some stability in the program, some way we can make sure the programs are safe. We do that all the time.

Bill Young and myself, we try to always buy the most we can buy once the program is mature so we get the best price and stability so the industry and the Air Force and the services understand. It is very difficult when you don't get a budget. For instance, here we are into the budget process, we don't have a budget here in the House. We don't have the details of the supplemental from the Defense Department. We were supposed to get it last week. We haven't gotten it yet. We know that is not your responsibility, but it hampers us in getting our work done.

We are trying to get a feel for what we can get done in the supplemental, which helps us with the base bill. But we know the constraints you are under because of the fact that the budget is not ready yet and you are constrained. Some questions you can't answer because you don't know what the results are going to be. We appreciate that.

But we also have to get these hearings in. We will have had 42 hearings and briefings between now and the 6th of April, so we are doing the best we can to hold up our end of the bargain. But we just need more information, and we appreciate your coming before the committee.

Mr. Young.

REMARKS OF MR. YOUNG

Mr. YOUNG. Mr. Chairman, let me welcome our witnesses and look forward to our testimony this morning. I apologize for walking in a few minutes late. Traffic was really heavy on 395 this morning.

Mr. MURTHA. I don't envy Bill Young. He lives out there in the rich section. He lives a long ways out.

Mr. YOUNG. Actually, I live so far away because it was much less expensive. But the city has moved out 35 miles to where I live. Anyway, I apologize for being late, Mr. Chairman.

Mr. MURTHA. We will listen to your summarized statement and get right to the questions. Admiral.

SUMMARY STATEMENT OF ADMIRAL ARCHITZEL

Admiral ARCHITZEL. Mr. Chairman, Congressman Young, and distinguished members of the committee, it is my honor to appear before you today to discuss the Department of the Navy's Tactical Aviation program. I would like to submit my written statement for the record.

Mr. MURTHA. Without objection.

Admiral ARCHITZEL. The fiscal year 2009 budget ensures that the Navy and Marine Corps maintain a joint force capable of meeting the wide spectrum of threats to our Nation. The Department continues the development and low rate procurement of the F-35 Lightning 2 aircraft and the development of the E2D Advanced Hawkeye, the EA-18G Growler aircraft, the CH-53 Heavy Lift Replacement aircraft, unmanned aviation, and new strike weapons capabilities.

In total, the Navy and Marine Corps aviation will procure 134 additional tactical and fixed wing aircraft, 69 rotary wing aircraft, and three unmanned systems, for a total of 206 aircraft with our fiscal year 2009 funding.

The Navy is committed to funding and fielding the Joint Strike Fighter as an affordable, multi-mission fifth generation strike fighter. The program is in its 8th year of a 13-year system design and development SDD program. There are presently three jets in flight test. The remaining SDD and low rate initial production, or LRIP aircraft, are in production. The initial Short Takeoff and Vertical Landing, or STOVL test aircraft, BF-1, took its first flight in June of 2008 and has flown 14 sorties to date. Initial STOVL mode operations are on track for this summer at Naval Air Station, Patuxent River, Maryland.

BF-2, the second STOVL aircraft, first flew on 25 February of this year and returned with no flight discrepancies noted. All F-35 variants are projected to meet their respective key performance parameters, and while the JSF production comes on line, the AV-8B Harrier still comprises 40 percent of the Marine tactical aviation and will remain in the active inventory until at least 2021.

Fiscal year 2009 provided funding for upgrades that will ensure the AV-8B remains viable and relevant in support of the Marine air-ground task force and combat and command requirements.

The F/A-18E and F Super Hornet and the EA-18G Growler are doing extremely well, delivering a superior capability to the warfighter on cost and on schedule. We have delivered over 268 Super Hornets to the fleet and procured 426 aircraft through fiscal year 2008. The program continues to make technological advances in concert with the required spiral development plan.

Earlier this year, we deployed our first and second F/A-18 "F" or Foxtrot Squadrons with a new APG-79 active electronically

scanned array AESA radar aboard the CVN 76; that is, the USS RONALD REAGAN and CVN 73, the USS GEORGE WASHINGTON, with outstanding results, five times the reliability and more than three times the performance over legacy Hornets. The APG-79 radar in particular is an acquisition success story.

The EA18-G Growler is currently in operational evaluation, E-1, and we will have delivered the aircraft to the fleet for training purposes in Naval Air Station Whidbey Island. In fiscal year 2009, we will procure 22 aircraft and transition our first squadron, VAQ 132, this summer. Initial operating capability, or IOC, is on track for late 2009. While we are awaiting the Growler and JSF, the Navy and Marine Corps will continue to utilize the EA-6B Prowler aircraft on an extremely high deployment tempo, supporting operations against growing and extremely high and diverse warfare threats. Ongoing structural improvements and planned improvement capabilities 3, or ICAP 3 program upgrades, have extended this aircraft's service life and will deliver increasing capability through its retirement from the Navy in 2012 and the Marine Corps in 2019.

The E-2D Advanced Hawkeye program has completed over 90 percent of its SDD program and an Operational Assessment, or OAS, and has currently two aircraft in flight test. The program will be presented to the Defense Acquisition Board for a milestone decision this month.

This program is absolutely critical to the Navy maintaining our continued superiority in tactical air operations against advanced threats. The technology is extremely challenging, but it is achievable.

Funding reductions have resulted in the loss of two aircraft, one from the 2009 and advanced procurement for the second would be in 2009 as well or two aircraft in total.

Major reductions in budget appropriations such as experienced in the FY 2009 President's Budget request will not allow the successes demanded by today's fiscal environment and this committee.

We are finding new ways to acquire the Navy's weapons systems, as with the P-8A Poseidon, which is the replacement aircraft for the P-3, where we are leveraging the efficiency of a commercial production product, the Boeing 737 800E airline, to realize the technologically advanced product in a shortened acquisition timeline. This aircraft will deliver 9 years after program initiation, when it will be both extremely capable and affordable. The program will commence flight tests later this year. Initial operating capability with one squadron of six aircraft will be in fiscal year 2013.

Lastly, we remain committed to the vision to meld manned and unmanned air systems, or UAS, in the future of tactical aviation by exploring an unmanned combat air system, or UCAS, capability. Our current demonstration efforts include maturing technologies for actual aircraft carrier catapult launches and arrested landings as well as the carrier controlled airspace integration. These testings will begin with first flight in 2009 and take to the carrier at the end of 2011, sir.

It is a pleasure to testify before the Committee today. I welcome your questions regarding the Department of Navy's tactical air programs.

[The statement of Admiral Architzel follows:]

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THE HOUSE APPROPRIATIONS COMMITTEE
DEFENSE SUBCOMMITTEE

STATEMENT OF
VICE ADMIRAL DAVID ARCHITZEL, USN
PRINCIPAL MILITARY DEPUTY
RESEARCH, DEVELOPMENT AND ACQUISITION
BEFORE THE
DEFENSE SUBCOMMITTEE
OF THE
HOUSE APPROPRIATIONS COMMITTEE
ON

DEPARTMENT OF THE NAVY'S TACAIR PROGRAM

MARCH 25, 2009

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

United States Navy Biography

Vice Admiral David Architzel
Principal Deputy
Assistant Secretary of the Navy
(Research, Development, and Acquisition)

Born in Ogdensburg, N.Y., and raised in Merrick, Long Island, Vice Admiral David Architzel earned a Bachelor of Science in mathematics at the U.S. Naval Academy in June 1973. Concurrent with his designation as a Naval aviator in November 1975, he earned a Master of Science in Aeronautical Systems from the University of West Florida.

Architzel served in Sea Control Squadron (VS) 30, deploying aboard USS *Forrestal* (CV 59), and as Maintenance Officer in VS 28, deploying aboard USS *Independence* (CV 62). He later returned to VS 30 as Executive Officer and subsequently as Commanding Officer. After selection to Nuclear Power Training, he served as Executive Officer of USS *Dwight D. Eisenhower* (CVN 69), the "Big Ike." During his tour, Ike was awarded the 1992 Naval Air Force Atlantic Battle Efficiency Award. Following this tour, he served as Executive Officer of PCU *John C. Stennis*, and Commanding Officer of USS *Guam* (LPH 9), flagship for Commander, Amphibious Squadron 2. During this tour, *Guam* won three consecutive Battle Efficiency Awards, making deployments to the Mediterranean Sea and Indian Ocean, which included Adriatic operations in support of the U.S. Ambassador to Somalia. He became the 6th Commanding Officer of USS *Theodore Roosevelt* (CVN 71) on Nov. 1, 1996. His command tour included a deployment to the Mediterranean and Arabian Gulf, during which time the Battle Group conducted operations in support of *Joint Guard* and *Southern Watch*.



Ashore, Architzel was selected for the Navy's Test Pilot School, filled a critical billet at the Spanish Naval War College in Madrid, Spain, and was department head of the Warfare Systems Group at the Naval Air Test Center, Patuxent River.

Architzel's first flag assignment was to Iceland, where he served as Commander, Iceland Defense Force and Commander, Fleet Air Keflavik. His follow-on flag assignments were Commander, Naval Safety Center, Norfolk, Commander, Navy Region Mid-Atlantic, Commander of Operational Test and Evaluation Force, Norfolk, and Program Executive Officer for Aircraft Carriers. On Aug. 6, 2007, Architzel assumed the role of Principal Deputy Assistant Secretary of the Navy for Research, Development, and Acquisition.

Architzel has accumulated over 5,000 flight hours, 4,300 in the S-3 and the remainder in some 30 other aircraft types. His decorations include the Defense Superior Service Medal, four Legions of Merit, three Meritorious Service Medals, the Navy Achievement Medal and various service related awards and campaign ribbons. He was also awarded the Spanish Naval Cross of Merit from His Majesty, King Juan Carlos of Spain, the Navy League's John Paul Jones Leadership Award for 1998, and the Commander's Cross with Star of the Icelandic Order of the Falcon presented by the President of Iceland.

David Architzel

Chairman Murtha, Congressman Young and distinguished members of the Subcommittee, thank you for providing us with this opportunity to appear before you to discuss the Department of the Navy's tactical aviation programs.

AVIATION PROGRAMS SUMMARY/OVERVIEW:

The Fiscal Year 2009 President's Budget implements a recapitalization strategy to obtain new capabilities - and initiatives to reduce operating costs while sustaining legacy fleet aircraft that are performing magnificently in current operations. We continue to work with industry in seeking ways to reduce costs such as contracting strategies on the F/A-18E/F airframe, MH-60R/S, and the MV-22; and we are implementing a 'prototype' strategy on the Joint Air-to-Ground Missile (JAGM) to ensure high technology readiness and reduced risk prior to entering System Development and Demonstration (SDD). The Fiscal Year 2009 Budget ensures that the Navy and Marine Corps maintain a joint force able to meet the spectrum of threats. The Department continues the development and Low Rate Procurement of the F-35 and continues the development of the E-2D Advanced Hawkeye, EA-18G, the VH-71 Presidential Helicopter Replacement Aircraft (Increment 1), the CH-53K Heavy Lift Replacement aircraft, Unmanned Aviation, and new strike weapons capabilities. In total, Navy/Marine Corps aviation will procure 134 additional tactical and fixed-wing aircraft, 69 rotary-wing aircraft and three VTUAV's for a total of 206 aircraft with our Fiscal Year 2009 funding.

F-35 Joint Strike Fighter (JSF)

In Fiscal Year 2009 Congress appropriated \$1.7 billion RDT&E,N for continuation of F-35 System Development and Demonstration (SDD) including \$200 million for F136 engine and \$1.7 billion APN for the Low Rate Initial Production lot three (LRIP 3) for seven Short Takeoff and Vertical Landing (STOVL) aircraft and the long lead requirements for 14 STOVL and one CV (aircraft carrier suitable variant) aircraft as part of LRIP 4. A subsequent approved FY 2009 Above Threshold Reprogramming (ATR) request provided \$43 million for long lead funding for the other three CV aircraft requested in the Fiscal Year 2009 President's Budget.

A 5th generation aircraft, the F-35 will enhance precision strike capability with unprecedented stealth, range, sensor fusion, improved radar performance, combat identification and electronic attack capabilities compared to legacy platforms. The F-35 carrier variant (CV) enhances the F/A-18E/F Block II and EA-18G in providing long-range strike capability and much improved persistence over the battlefield. The STOVL combines the multi-role versatility of the legacy F/A-18 and the basing flexibility of the AV-8B. The commonality designed into the F-35 program will minimize acquisition and operating costs of Navy and Marine Corps tactical aircraft, and allow enhanced interoperability with our sister Service, the United States Air Force, and Allies. The F-35 is eight years into a 13-year SDD Program. Technical, software, production processes, testing, etc. maturation is tracking to plan and substantially exceeding legacy standards. Three SDD jets (AA-1, BF-1 and BF-2) are in flight testing. The remaining SDD jets and ground test articles plus LRIP I and LRIP II aircraft are in various stages of production.

The SDD jets are taking longer to build than anticipated, but are setting new standards for quality and manufacturing efficiencies that improve with each jet. In flight testing, the initial Conventional Takeoff and Landing (CTOL) aircraft (AA-1) continues to demonstrate superb performance and reduce program risk, with 69 sorties (98 flight hours) flown through late February 2009. BF-1, the first STOVL flight test jet, first flew in June 2008, on the schedule established two-years prior. BF-1 has flown 14 flights, and initial STOVL-mode operations are planned in June 2009. BF-2 first flew on Wednesday 25 February and returned with no flight discrepancies noted. Software is 69 percent (12 million lines) complete against the planned 70 percent complete per the spiral development plan/schedule, with record-setting code-writing efficiencies. Software demonstrates stability (i.e., tens to hundreds of hours error-free run times) across multiple mission system subsystems. Systems integration testing continues on plan via flight tests, a flying lab, and over 150,000 hours of ground labs testing. A fully integrated mission systems jet flies in 2009. The second production lot contract was signed below the cost model prediction. All F-35 variants are projected to meet their respective Key Performance Parameters. LRIP III contract negotiations are ongoing. The F-35 plan for incremental blocks of capability balances cost, schedule and risk.

The F135 engine development has completed 11,000+ test hours on 16 engines through early-February 2009. Prior F135 engine test failures are understood and have been addressed.

The Department supported the omission of continued funding for the alternate engine (F136) in the Fiscal Year 2009 President's Budget request. The DON maintains there are higher priority needs in the budget and that the risks associated with a single engine supplier continue to be manageable. The three Fiscal Year 2007 Congressionally-directed engine studies have been completed. The conclusions, while supportive of competition in general, reinforced the Department's initial findings that the projected savings from not doing competition outweigh the investment and sustainment costs.

F/A-18 E/F Super Hornet

In Fiscal Year 2009 Congress appropriated \$1.9 billion in APN for 23 F/A-18 E/F Block II aircraft for the final year of the five-year MYP contract (Fiscal Years 2005 to 2009). The F/A-18E/F continues to transition into the fleet, improving the survivability and strike capability of the carrier air wing. The Super Hornet provides a 40 percent increase in combat radius, 50 percent increase in endurance, and 25 percent increase in weapons payload over our older, legacy Hornets. Over 426 F/A-18E/Fs will have been procured through Fiscal Year 2008. The program is on track to complete procurement of the program of record of 506 aircraft by 2012. The Super Hornet has used a spiral development approach to incorporate new technologies, such as the Joint Helmet Mounted Cueing System, Advanced Targeting Forward Looking Infra-Red (ATFLIR), with shared real-time video, Shared Reconnaissance Pod System (SHARP), and Multifunctional Information Distribution System (MIDS) data-link. The APG-79 Active Electronically Scanned Array (AESA) radar system, in the Block II aircraft, has

completed operational testing and the achieved Full Rate Production in June 2007 and Material Support Date in December 2008. Four fully operational AESA-equipped F/A-18F squadrons have been transitioned and two squadrons have been deployed with full Integrated Logistics Support. The F/A-18E/F Fiscal Year 2009 Budget also includes \$129.3 million to implement commonality, maintain capabilities, and improve reliability and structural safety.

F/A-18 A/B/C/D Legacy Hornet

In Fiscal Year 2009 Congress appropriated \$321.6 million for the continuation of the systems upgrade programs for the F/A-18 platform. As the F/A-18 program transitions to the F/A-18E/F and JSF, the existing inventory of 627 F/A-18A/B/C/Ds (as of January 2009) will continue to comprise half of the Navy's strike fighter inventory until 2013. Included in this request is the continued procurement of recently fielded systems such as the Joint Helmet Mounted Cueing System, Advanced Targeting FLIR, Multi-Function Information Distribution System, and a Digital Communications System. The Marine Corps continues to upgrade 56 Lot 7-9 F/A-18A models and 30 Lot 10/11 F/A-18C models to a Lot 21 F/A-18C avionics aircraft capability with digital communications and a tactical data link. The Marine Corps anticipates programmed upgrades to enhance the current capabilities of the F/A-18C/D with digital communications, tactical data link and tactical reconnaissance systems. This upgrade ensures that our F/A-18s remain viable and relevant in support of Tactical Air Integration and Expeditionary Maneuver Warfare. The Marines expect the F/A-18 to remain in the active inventory until 2023. The Marines are also employing the LITENING targeting pod on the F/A-18A+/C/D aircraft in expeditionary operations, to include Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). When combined with data link hardware, the LITENING pod provides real time video to ground forces engaged with the enemy through Remotely Operated Video Enhanced Receiver (ROVER) workstations. Continued analysis of TACAIR inventories will continue throughout 2010 and beyond to determine the health of the legacy fleet as the F/A-18A-D is transitioned to the F-35.

Airborne Electronic Attack (AEA) / EA-18G

In Fiscal Year 2009 Congress appropriated \$128.9 million in RDT&E,N for continuation of SDD and \$1.6 billion in APN for 22 full rate production EA-18G Lot 3 aircraft. The EA-18G continues its development as the Navy's replacement for the EA-6B AEA aircraft. The EA-18G will replace carrier-based Navy EA-6B aircraft by 2012. A total quantity of 27 aircraft will be procured in LRIP. The Navy is using the F/A-18E/F MYP contract to buy the Lot 3 aircraft in Fiscal Year 2009. SDD continues on schedule with the two development aircraft having first flown in 2006 and are currently in developmental test at NAWC, Patuxent River. The program began Operational Evaluation in Fall 2008, leading to Initial Operating Capability (IOC) in Fiscal Year 2009 and Full Operating Capability (FOC) in Fiscal Year 2012.

P-8A Poseidon

In Fiscal Year 2009, Congress appropriated \$1.132 billion for development of the long awaited P-3 replacement aircraft, the P-8 Poseidon. The program is on track for fielding in late Fiscal Year 2013 when the first squadron will have transitioned and be ready to deploy forward in support of the Combatant Commander. The program completed Design Readiness Review in August 2007 and is currently building the fourth of eight test aircraft. The first three test articles (two flight test aircraft and a static test article) have been delivered in accordance with the revised plan designed to recover from the two month machinist strike that interrupted deliveries last fall. The current plan calls for first flight of the first flight test article in late April of this year and the Navy and contractor fully expect the reposition flight to occur as planned.

E-2D Advanced Hawkeye (AHE)

The E-2D Advanced Hawkeye is a critical enabler of transformational intelligence, surveillance and reconnaissance by providing robust overland and littoral capability against current and future aircraft and cruise missile-type targets. The E-2D Advanced Hawkeye replaces the current E-2C Hawkeye aircraft. The radar for the Advanced Hawkeye will provide enhanced capability in the overland and the littoral environment, in addition to the open ocean environment, while improving performance against clutter and small targets, adding transformational surveillance and theater air and missile defense capabilities. In Fiscal Year 2009 Congress appropriated \$484.2 million in RDT&E,N for continuation of SDD and \$385.7 million in APN-1 for two Low-Rate Initial Production (LRIP) Lot I aircraft and advanced procurement for Fiscal Year 2010 LRIP Lot II aircraft. This funds one less aircraft than requested in the FY 2009 President's Budget request and underfunds advanced procurement for Fiscal Year 2010 LRIP Lot II aircraft. Two SDD aircraft continue in developmental flight test since August 2007. An 'Operational Assessment' was completed in 1st quarter of Fiscal Year 2009 to support a Milestone-C decision scheduled in March 2009.

SUMMARY

The Fiscal Year 2009 President's Budget reflects considerable effort in identifying affordable solutions for the Department's aviation programs through a balance between sustaining fielded capabilities, as they are employed in the GWOT and continued forward presence worldwide, and a substantive recapitalization effort that will deliver significantly better capabilities to the war fighter. The Department's aviation acquisition team continues to work aggressively to identify efficiencies in the development, testing and subsequent procurement of platforms, components, and weapons systems in order to ensure that investments made result in quality products and services provided to the fleet.

In closing Mr. Chairman, we thank you for the opportunity to testify before your Subcommittee regarding the Department of the Navy's tactical aviation programs.

SUMMARY STATEMENT OF GENERAL SHACKELFORD

Mr. MURTHA. General Shackelford.

General SHACKELFORD. Good morning Chairman Murtha, Congressman Young, members of the committee. It is my pleasure to be here today to discuss Air Force combat aircraft acquisition and other programs that are important to your Air Force and Nation. I ask that my written statement be submitted for the record.

Mr. MURTHA. Without objection.

General SHACKELFORD. My remarks today will address the progress on weapons systems in our global power acquisition portfolio and the status of the combat search and rescue recapitalization effort.

This month, the Air Force accepted its 136th F-22 aircraft. F-22 production is currently delivering Lot 7 aircraft ahead of scheduled contract delivery dates at a rate of about two per month. When the plant delivers the last Lot 9 aircraft in December 2011, the Air Force will have completed the program of record of 183 Raptors.

Also this month, F-35 AA-1 completed its 75th test flight, and in November of last year accomplished its first supersonic flight. The cooperative avionics test bed continues to demonstrate unprecedented risk reduction for this stage of major weapons system development. We project the F-35 will meet all key performance parameters.

We continue to upgrade our legacy fighter fleet to enhance capabilities in support of current contingency operations. Our F-16s, the bulk of the fighter fleet, are undergoing structural upgrades to replace life-limited structural components. The common configuration implementation program and avionics update continues with modifications that include a new mission computer, color displays, an air-to-air interrogator, Link 16, and the joint helmet mounted queuing system. We expect the F-16 to be a capable element of the fighter force through 2024.

The F-15A through D fleet returned to flying status following the November 2007 mishap after engineering analysis confirmed safety of flight. Of the 407 aircraft in the inventory, nine were grounded due to the longeron crack. The Air Force repaired five, and four were retired due to proximity to planned retirement. The Air Force will conduct a full scale fatigue test and aircraft tear-down and improve structural monitoring to establish the maximum F-15 service life and more effectively manage the structural health of the fleet.

The F-15E, which was not affected by the longeron crack, continues to support ongoing operations in Afghanistan and Iraq. The Air Force improved the F-15E's ability to rapidly engage and destroy time sensitive targets by adding secure radios and data links for faster communications with ground units and forward controllers, by integrating the latest precision weapons that improve accuracy as well as reduce collateral damage, by adding a helmet-mounted queuing system that reduces the F-15E's time to engage a target by up to 80 percent, and by adding a state-of-the-art active electronically scanned array radar system that not only addresses sustainment issues, but also gives the F-15E advanced capabilities

to identify and engage targets and protect itself from enemy threats.

An A-10 service life extension program and overhaul programs will allow us to continue flying these venerable aircraft. The Air Force is currently upgrading 337 A-10s to the C configuration with precision engagement capability, anticipating completion by the end of fiscal year 2011.

The B-1 was once solely a nuclear deterrent, but the Air Force refocused its capabilities through modernizing its conventional lethality. A perfect example of the B-1's potential was realized by adding the advanced targeting pod to the platform's sensor suite. In an acquisition success, the Air Force and industry responded to AFCENT's highest Urgent Operational Need requirement by energizing a fast track development and procurement timeline. Thanks to supplemental funding, the 34th Bomb Squadron from Ellsworth Air Force Base, South Dakota, was able to deploy a full contingent of Sniper-equipped B-1 bombers to support both Operation Enduring Freedom and Operation Iraqi Freedom operations in June 2008 without a single break in daily combat operations.

B-2 availability has steadily increased over the past five years, largely due to focused efforts to enhance low observable maintenance, such as the highly successful alternate high frequency material program. The B-2 faces increasing pressure to upgrade avionics, originally designed over 20 years ago. The three increment Extremely High Frequency Satellite Communications and Computer Upgrade program seeks first in increment one to upgrade the Spirit's flight management computers as an enabler for future avionics efforts. Increment two integrates the family of beyond-line-of-sight terminals along with a low observable antenna to provide secure, survivable, strategic communications, while increment three will connect the B-2 into the Global Information Grid.

Increment one of EHF SATCOM and Computer Upgrade is currently in engineering and manufacturing development and on track to begin procurement in fiscal year 2011 for fleet installations beginning at the end of fiscal year 2013. The B-2 is also receiving a new radar antenna and upgrading selected radar components as part of the radar modernization program.

The Air Force has invested in B-52 modernization programs to keep the platform operationally relevant by adding satellite and nuclear survivable and secure wideband high data rate communications, advanced targeting pods, both Sniper and Litening, aircraft computer and data transfer unit upgrades, and smart weapons integrated to improve conventional weapons capability. With the B-1 Lancer and the B-2 Spirit, the B-52 Stratofortress serves as a key component of the United States long-range bomber force.

To recapitalize our rescue helicopter fleet, the Air Force intends to replace 101 aging HH-60G Pave Hawk helicopters with 141 CSAR-X aircraft. The CSAR-X is currently in source selection, with an expected contract award targeted for spring of this year. Desired initial operational capability is third quarter of fiscal year 2013, with a required IOC by second quarter of fiscal year 2015.

We are building a 21st century Air Force prepared to succeed strategically, operationally, and tactically. These highly capable and lethal aviation programs bring global vigilance, global reach,

and global power to the joint fight. They are critical enablers to the joint force.

[The statement of General Shackelford follows:]

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**DEPARTMENT OF THE AIR FORCE
PRESENTATION TO THE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON DEFENSE
UNITED STATES HOUSE OF REPRESENTATIVES**

SUBJECT: COMBAT AIRCRAFT ACQUISITION

**STATEMENT OF: LIEUTENANT GENERAL MARK D. SHACKELFORD
MILITARY DEPUTY, SECRETARY OF THE AIR FORCE
FOR ACQUISITION**

MARCH 25, 2009

**NOT FOR PUBLICATION UNTIL RELEASED
BY THE COMMITTEE ON APPROPRIATIONS
SUBCOMMITTEE ON DEFENSE
UNITED STATES HOUSE OF REPRESENTATIVES**



BIOGRAPHY



UNITED STATES AIR FORCE

LIEUTENANT GENERAL MARK D. "SHACK" SHACKELFORD

Lt. Gen. Mark D. "Shack" Shackelford is the Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, the Pentagon, Washington, D.C. He is responsible for research and development, test, production, and modernization of Air Force programs worth more than \$23 billion annually.

General Shackelford entered the Air Force in 1977 as a distinguished graduate of the U.S. Air Force Academy. He has more than 2,700 flight hours in 40 aircraft types with operational experience in the F-4 and F-16. The general was an experimental test pilot in the F-16 and the first Air Force pilot to fly the YF-22 Advanced Tactical Fighter prototype. He managed the F-22 Cockpit Development Program and directed the T-38, F-5, F-16 and F-22 programs. The general commanded a test squadron at Ogden Air Logistics Center, Hill Air Force Base, Utah, and the test wing at the Air Armament Center, Eglin AFB, Fla. He also served as Deputy, Test and Assessment, for the Missile Defense Agency, and then Director of Plans and Requirements, Headquarters Air Force Space Command, Peterson AFB, Colo. Prior to his current assignment, he was the Director, Global Power Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Headquarters U.S. Air Force, Washington, D.C.



General Shackelford holds Department of Defense Acquisition Corps Level III certifications in Test and Evaluation; Program Management; and Systems Planning, Research, Development and Engineering. He holds master level certification in the Space Professional Development Program. The general is a distinguished graduate of undergraduate pilot training, F-16 Fighter Weapons School and the U.S. Air Force Test Pilot School.

EDUCATION

1977 Bachelor of Science degree in aeronautical engineering, U.S. Air Force Academy, Colorado Springs, Colo.
 1977 Squadron Officer School, by correspondence
 1984 F-16 Fighter Weapons School, Nellis AFB, Nev.
 1985 Air Command and Staff College, by correspondence
 1987 U.S. Air Force Test Pilot School, Edwards AFB, Calif.
 1990 Master of Science degree in mechanical engineering, California State University, Fresno
 1991 Program Management Course, Defense Systems Management College, Fort Belvoir, Va.
 1995 Air War College, Maxwell AFB, Ala.
 2000 Defense Systems Management College, Fort Belvoir, Va.
 2000 Advanced Management Program, Carnegie-Mellon University, Pittsburgh, Pa.
 2008 Program for Executives in Logistics and Technology, University of North Carolina at Chapel Hill
 2008 Enterprise Leadership Seminar, University of North Carolina at Chapel Hill

ASSIGNMENTS

1. November 1977 - October 1978, student, undergraduate pilot training, Columbus AFB, Miss.
2. November 1978 - February 1979, student, fighter lead-in training, 436th Tactical Fighter Training Squadron, Holloman AFB, N.M.
3. February 1979 - September 1979, student, F-4 training, 306th Tactical Fighter Training Squadron, Homestead AFB, Fla.
4. September 1979 - November 1980, F-4E aircraft commander, 68th Tactical Fighter Squadron, Moody AFB, Ga.
5. December 1980 - August 1981, F-4D aircraft commander, 80th Tactical Fighter Squadron, Kunsan Air Base, South Korea
6. January 1982 - July 1982, F-16 fighter pilot, 35th Tactical Fighter Squadron, Kunsan AB, South Korea
7. August 1982 - June 1986, F-16 instructor pilot, and weapons and tactics officer, 72nd Tactical Fighter Training Squadron, MacDill AFB, Fla.
8. July 1986 - June 1987, student, U.S. Air Force Test Pilot School, Edwards AFB, Calif.
9. July 1987 - September 1987, experimental test pilot, 6512th Test Squadron, Edwards AFB, Calif.
10. September 1987 - March 1989, experimental test pilot, F-16 Combined Test Force, Edwards AFB, Calif.
11. March 1989 - January 1991, YF-22 project test pilot, Advanced Tactical Fighter Combined Test Force, 6511th Flight Test Squadron, Edwards AFB, Calif.
12. January 1991 - June 1991, student, Defense Systems Management College, Fort Belvoir, Va.
13. August 1991 - August 1993, Chief, Cockpit Integrated Product Team, F-22 System Program Office, Wright-Patterson AFB, Ohio
14. August 1993 - June 1994, Commander, 514th Flight Test Squadron, Hill AFB, Utah
15. July 1994 - June 1995, student, Air War College, Maxwell AFB, Ala.
16. July 1995 - August 1997, Director, Fighter and Trainer Directorate, San Antonio ALC, Kelly AFB, Texas
17. August 1997 - August 1999, Commander, 46th Test Wing, Eglin AFB, Fla.
18. August 1999 - June 2000, Deputy Director, Directorate of Plans and Programs, Headquarters Air Force Materiel Command, Wright-Patterson AFB, Ohio
19. June 2000 - May 2002, Director, F-16 System Program Office, Aeronautical Systems Center, Wright-Patterson AFB, Ohio
20. May 2002 - November 2002, Director, F-22 SPO, ASC, Wright-Patterson AFB, Ohio
21. November 2002 - January 2003, special assistant to the Commander, ASC, Wright-Patterson AFB, Ohio
22. February 2003 - May 2005, Deputy, Test and Assessment, Missile Defense Agency, Office of the Secretary of Defense, Washington, D.C.
23. May 2005 - April 2007, Director of Plans and Requirements, Headquarters Air Force Space Command, Peterson AFB, Colo.
24. April 2007 - October 2008, Director, Global Power Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Headquarters U.S. Air Force, Washington, D.C.
25. October 2008 - present, Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, the Pentagon, Washington, D.C.

FLIGHT INFORMATION

Rating: Command pilot
 Flight hours: More than 2,700
 Aircraft flown: F-4, F-16 and 40 aircraft types

MAJOR AWARDS AND DECORATIONS

Distinguished Service Medal
 Defense Superior Service Medal
 Legion of Merit with oak leaf cluster
 Meritorious Service Medal with three oak leaf clusters
 Air Medal with two oak leaf clusters
 Joint Service Commendation Medal
 Air Force Commendation Medal with two oak leaf clusters

OTHER ACHIEVEMENTS

1977 Outstanding Cadet in Astronautical Engineering, U.S. Air Force Academy
 1978 Air Training Command Commander's Trophy, Undergraduate Pilot Training

1978 Orville Wright Achievement Award, Order of Daedalians
1987 Liethen-Tittle Award, U.S. Air Force Test Pilot School
1988 Lieutenant General Bobby Bond Memorial Aviators Award

EFFECTIVE DATES OF PROMOTION

Second Lieutenant June 1, 1977
First Lieutenant June 1, 1979
Captain June 1, 1981
Major March 1, 1988
Lieutenant Colonel July 1, 1991
Colonel Feb. 1, 1995
Brigadier General April 1, 2002
Major General Nov. 1, 2005
Lieutenant General Oct. 6, 2008

(Current as of October 2008)

Introduction

Chairman Murtha, Representative Young and distinguished members of the Subcommittee, thank you for the opportunity to appear before you today to discuss Air Force combat aircraft acquisition, matters that are extremely important to the Air Force and our Nation.

Legacy Fighter Fleet

The Air Force fighter force is the oldest it has ever been at an average age of more than 20 years. Our legacy aircraft are showing signs of age; however, it is able to accomplish today's missions. The duration and intense overseas contingency operations tempo have accelerated service life consumption for numerous platforms. This sustained high operations tempo has also contributed to lower readiness levels, which does not allow us to take much risk in operations and maintenance. We must sustain readiness and be able to fight today.

The Air Force continues to improve fighter aircraft capability to conduct precision targeting in close coordination with our Soldiers on the ground by fielding the Sniper and LITENING Advanced Targeting Pods (ATPs) with video downlink (VDL) capability. The VDL-equipped pods are able to transmit streaming sensor video directly to ground forces equipped with the Remotely Operated Video Enhanced Receiver terminal, greatly speeding target acquisition and providing a revolutionary improvement in support to ground forces both in the traditional Close Air Support and emerging non-traditional intelligence, surveillance, and reconnaissance missions. There are currently 198 Sniper and 225 Litening ATPs in the Combat Air Forces. Of those, 94 Sniper and 111 Litening are VDL equipped, and all 91 ATPs in theater have VDL.

A-10

The A-10 provides the Joint Force Commander lethal, precise, persistent, and responsive firepower for Close Air Support and Combat Search and Rescue. It has performed superbly in OPERATIONS DESERT STORM, ALLIED FORCE, ENDURING FREEDOM and IRAQI FREEDOM. However, the age of the A-10 and high operations tempo have taken a toll

on the fleet. In the fall of 2006, the Air Force Fleet Viability Board recommended that the Air Force upgrade 242 thin-skin center wing A-10 aircraft with thick-skinned center wing replacements. Additionally, A-10 landing gear failures have resulted in a program for replacing failure-prone parts. In the near-term, a Service Life Extension Program and overhaul programs will allow us to continue flying these venerable aircraft. The Air Force is currently upgrading 337 A-10s to the "C" configuration through the precision engagement modification and anticipates completion by the end of Fiscal Year 2011. This modification enables J-Series weapons, such as Joint Direct Attack Munitions (JDAM) and Wind Corrected Munitions Dispenser; integrates advanced targeting pods with video downlink; replaces monochrome cockpit displays with color multi-function displays; installs new pilot throttle and stick controls; adds a moving map capability and a mass-memory upgrade; and doubles current DC power. Additionally, we have integrated beyond line of sight radios into the A-10 for faster communication with ground units, forward controllers, and command and control centers.

F-15 A-D

The average age of the F-15A-D fleet is over 25 years old and the average age of F-15E fleet is over 16 years old. However, analysis suggests that Air Combat Command can manage the fleet through scheduled field/depot inspections under an individual aircraft tracking program.

The F-15A-D fleet has returned to flying status after engineering analysis confirmed they are safe for flight. Of the 407 aircraft in the inventory, only nine were grounded due to the longeron crack. The Air Force repaired five, and four were retired due to their proximity to planned retirement. The five aircraft were repaired in 2008 at a cost of approximately \$235,000 each using organic materials and labor at Warner-Robins Air Logistics Center.

Based on the recommendation of Boeing and depot engineers, the Air Force has instituted recurring inspections of F-15 longerons every 400 flight hours to detect cracks before they become catastrophic. Analysis confirms that this interval is very conservative and will avoid a mishap such as the one that occurred on November 2, 2007. Additionally, the Air Force will conduct a full-scale fatigue test, aircraft teardown, and improved structural monitoring to

help establish the maximum F-15 service life and more effectively manage structural health of the fleet. We expect these efforts to successfully enable the 176 F-15C/D long-term "Golden Eagles" to operate safely and effectively through 2025.

F-15E

The F-15E fleet, which was not affected by the longeron crack, continues to provide support for on-going operations in Afghanistan and Iraq. Like the A-10, the F-15E performed superbly in operations OPERATIONS DESERT STORM, ALLIED FORCE, ENDURING FREEDOM and IRAQI FREEDOM. The Air Force has been working hard to improve the F-15E's ability to rapidly engage and destroy time sensitive targets by adding secure radios and data links for faster communications with ground units and forward controllers; by integrating the latest precision weapons that not only hit a target accurately but are designed to reduce collateral damage; by adding a helmet mounted cueing system that will reduce the F-15E's time to engage a target by up to 80%; and by adding a state-of-the-art Active Electronically Scanned Array (AESA) radar system that not only addresses sustainment issues with the current system but will give the F-15E advanced capabilities to identify and engage targets, share real-time information with other aircraft, and protect itself from enemy threats. The Air Force plans for the F-15E to be an integral part of the Nation's force through at least 2035.

F-16

Our F-16s, the bulk of the fighter fleet, are undergoing a structural upgrade program to replace known life-limited structural components. Due to the use of more stressing mission profiles, this upgrade program is required to maintain the original design airframe life of 8,000 flight hours. Wing pylon rib corrosion, a known problem with the F-16 aircraft, is an issue we monitor closely. This corrosion can prevent the F-16s from carrying pylon mounted external fuel tanks which limits their effective combat range. We currently inspect F-16 aircraft every 800 hours to monitor for this problem. In partnership with industry, the Air Force has recently developed and certified an effective repair allowing repair of affected aircraft at the unit in a single day instead of requiring a lengthy wing overhaul at the depot. As of February 23, 2009,

maintainers have repaired 34 wings at four units worldwide, restoring those aircraft to full mission capability. We will award a long term support contract within the next four months which will further enhance the ability of units to obtain repairs for their aircraft.

In other inspections, maintainers have found bulkhead cracks in approximately 24% (97 of 398) of our Block 40/42 F-16 aircraft. As of February 23, 2009, two Block 40/42 F-16 aircraft were in non-flying status awaiting bulkhead repair or replacement. An additional 37 aircraft continue to fly with increased inspection requirements to measure crack growth. We will continue to monitor this situation closely.

The Common Configuration Implementation Program is a top F-16 priority and will enable the maintenance of a single operational flight program configuration on the Block 40/42/50/52 F-16s. The Block 50/52 modification is complete and the Block 40/42 modification will be complete in Fiscal Year 2010. It combines several modifications including a new mission computer, color displays, air-to-air interrogator (Block 50/52 only), Link-16, and Joint Helmet Mounted Cueing System. The F-16 is expected to be a capable element of the fighter force well into 2024.

Fifth Generation Fighters

Fifth generation fighters like the F-22 and the F-35 are key elements of our Nation's defense and ability for deterrence. As long as hostile nations recognize that U.S. airpower can strike their vital centers with impunity, all other U.S. Government efforts are enhanced, which reduces the need for military confrontation. This is the timeless paradox of deterrence; the best way to avoid war is to demonstrate to your enemies, and potential enemies, that you have the ability, the will, and the resolve to defeat them.

Both the F-22 and the F-35 represent our latest generation of fighter aircraft. We need both aircraft to maintain the margin of superiority we have come to depend upon, the margin that has granted our forces in the air and on the ground, freedom to maneuver and to attack. The F-22 and F-35 each possess unique complementary and essential capabilities that together provide the synergistic effects required to maintain that margin of superiority across the

spectrum of conflict. The OSD-led 2006 QDR Joint Air Dominance study underscored that our nation has a critical requirement to recapitalize tactical air forces. Legacy 4th generation aircraft simply cannot survive to operate and achieve the effects necessary to win in an integrated, anti-access environment.

F-22 Future Capabilities & Modifications

The F-22 Raptor is the Air Force's primary air superiority fighter, providing unmatched capabilities for air supremacy, homeland defense, and cruise missile defense for the Joint Team. The multi-role F-22's combination of speed, stealth, maneuverability and integrated avionics gives this remarkable aircraft the ability to gain access and survive in high threat environments. Its ability to find, fix, track, and target enemy air and surface-based threats ensures air dominance and freedom of maneuver for all joint forces.

Similar to every other aircraft in the U.S. inventory, there is a plan to regularly incorporate upgrades into the F-22 to ensure the Raptor remains the world's most dominant fighter in the decades to come. The F-22 modernization program consists of two major efforts that, together, will ensure every Raptor maintains its maximum combat capability: the Common Configuration program and a pre-planned product improvement (P3I) program (Increments two and three). We are currently in year six of the planned 13-year program.

As of February 1, 2009, the Air Force has accepted 135 F-22 aircraft, out of a programmed delivery of 183. Most of these aircraft include the Increment two upgrade, which provides the ability to employ JDAM at supersonic speeds and enhances the intra-flight data-link to provide connectivity with other F-22s. The Air Force will upgrade the F-22 fleet under the Joint Requirements Oversight Council approved Increment three upgrade designed to enhance both air-to-air and precision ground attack capability. Raptors from the production line today are wired to accept Increment 3.1, which when equipped, upgrades the APG-77 AESA radar to enable synthetic aperture radar ground mapping capability, provides the ability to self-target JDAMs using on-board sensors, and allows F-22s to carry and employ eight small diameter bombs (SDBs). The Air Force will begin to field Increment 3.1 in Fiscal Year 2010. Future

F-22s will include the Increment 3.2 upgrade, which features the next generation data-link, improved SDB employment capability, improved targeting using multi-ship geo-location, automatic ground collision avoidance system (Auto GCAS) and the capability to employ our enhanced air-to-air weapons (AIM-120D and AIM-9X). Increment 3.2 should begin to field in Fiscal Year 2013.

The planned end-state of the F-22 modernization plan will result in 34 Block 20 aircraft used for test and training, 63 combat-coded Block 30s fielded with Increment 3.1, and 83 combat-coded Block 35s fielded with Increment 3.2.

There is also an Increment 3.3 upgrade planned, which is currently unfunded. It includes Mode 5/S, which is the next generation Identification Friend or Foe and advanced air-traffic control transponder, radar auto search/auto detect, which gives automated target cueing using fourth generation AESA radar, and a ground-moving-target-indicator-and-tracking capability.

F-22 Procurement Plans

The F-22 production program is currently delivering Lot 7 aircraft ahead of scheduled contract delivery dates at a rate of about two per month. Lot 7 Raptors are the first lot of the three-year multiyear procurement contract awarded the summer of 2007. The Air Force completed F-22 deliveries to Elmendorf Air Force Base, Alaska and we are currently underway with deliveries to Holloman Air Force Base, New Mexico with expected completion in January 2011. When the plant delivers the last aircraft of Lot 9 in December 2011, we will have completed the program of record of 183 Raptors.

F-35

The F-35 program will develop and deploy a family of highly capable, affordable, fifth generation strike fighter aircraft meeting operational needs of the Air Force, Navy, Marine Corps, and Allies with optimum commonality to minimize life cycle costs. The Joint Strike Fighter (JSF) was designed from the bottom-up to be our premier surface-to-air killer and is uniquely equipped for this mission with its cutting edge processing power, synthetic aperture

radar integration techniques, and advance target recognition. The JSF also provides "leap ahead" capabilities in resistance to jamming, maintainability, and logistic support. The F-35 is currently in the 8th year of the 13 year System Development and Demonstration phase.

The F-35 is projected to meet all Key Performance Parameters (KPPs) and as of February 20, 2009 A-1 has completed 69 test flights. Recently, it completed its first supersonic flight and the Cooperative Avionics Test Bed (CAT-B) continues to provide unprecedented risk reduction at this stage in a major weapon system not seen in any legacy program. In December 2008, the Undersecretary of Defense for Acquisition, Technology and Logistics approved full funding for seven Conventional Take-Off and Landing (CTOL) aircraft and engines, plus sustainment and associated equipment as part of the Low Rate Initial Production Lot 3 acquisition decision memorandum. In addition, Secretary Young approved full funding for seven Short Take-Off and Vertical Landing (STOVL) aircraft plus sustainment and associated equipment contingent upon successful completion of the F135 Pratt & Whitney lead engine Stress Test, Flight Test Engine six Proof Test and receipt of full STOVL flight clearance. He also approved advance procurement for long lead items and associated material and support equipment for Lot 4 for 12 CTOL aircraft, up to 16 STOVL aircraft and up to four carrier variant aircraft.

Joint Strike Fighter Alternative Engine Program

The Department continues to believe the risks associated with a single source engine supplier are manageable and do not outweigh the investment required to fund a competitive alternate engine. However, the Air Force and Navy are executing the funding appropriated by Congress in 2009 to continue the F136 program. General Electric/Rolls Royce successfully started their "First Engine To Test" on January 30, 2009, one month ahead of contract requirement.

The cost to continue F136 engine development and production is estimated at \$4.3 billion through Fiscal Year 2015. Continued funding for the F136 engine carries cost penalties to both F135 and F136 engines for reduced production line learning curves.

Legacy Bomber Fleet

The Air Force bomber fleet exemplifies how we continue to sustain and modernize legacy aircraft as they are passed from one generation of crew force to the next.

B-1

The B-1 provides the Joint Force Commander massive firepower potential coupled with a significant loiter capability perfectly suited for the inconsistent tempo of today's ongoing operations. Added to this is the B-1's unique supersonic dash potential which allows a single aircraft to perform as a roving linebacker over large portions of the overall area of responsibility. Once solely a nuclear deterrent, the Air Force has re-focused the B-1's capabilities through modernizing its current conventional lethality.

A perfect example of the B-1's potential was realized by adding Advanced Targeting Pod to the platform's sensor suite. In an exceptional display of acquisition effectiveness, in 2007 the Air Force and our corporate partners responded to Air Force Central Command's (AFCENT) highest Urgent Operational Need requirement by energizing a fast-track development and procurement timeline. With the help of supplemental funding, by June 2008 the 34th Bomb Squadron out of Ellsworth Air Force Base, South Dakota was able to deploy a full complement of Sniper-equipped B-1 bombers to support both OPERATIONS ENDURING FREEDOM and IRAQI FREEDOM operations without a single break in daily combat operations. The program continues in 2009 to outfit the remaining fleet and incorporate laser-guided weapons as well as integrating the pod data directly into the avionics system, allowing for direct machine-to-machine transfer of targeting data. As stated by the Combined Force Air Component Commander, "The Sniper pod on the B-1 Bomber is amazing."

This new capability means the B-1 is even more in demand for current operational taskings. The non-stop overseas contingency operations are taking a toll on the overall fleet. Currently in Fiscal Year 2009, the Air Force is addressing five different issues which would have meant potentially grounding aircraft if they were not addressed. As a baseline to many of these sustainment modifications, the Air Force also embarked on its largest cockpit and

communications modernization for the B-1 since its inception. Begun in 2005, the B-1 Fully Integrated Data Link (FIDL) program infuses a tactical Link-16 data link and a Joint Range Extension Beyond Line of Sight data link into an entirely overhauled modern cockpit. This system of modifications removes legacy monochrome displays and incorporates a series of color multifunction displays capable of displaying a wide array of fused data at all crew stations. Although the B-1 FIDL program has suffered several setbacks, through the continued persistence of Air Force and congressional support the program is now turning the corner and progressing toward completion. This upgrade will not only help protect the B-1 parts from obsolescence, it will evolve an already capable conventional platform into a networked provider of precision firepower.

B-2

The B-2 Spirit Advanced Technology Bomber provides a lethal combination of range, payload, and stealth, and remains the world's sole long-range, low observable bomber, and the only platform capable of delivering 80 independently targeted 500-lb JDAMs. Four B-2 bombers are currently deployed to Guam along with a contingent of F-22 fighters. This is the fourth Spirit deployment to Guam.

While B-2 availability has steadily increased over the past five years, in large part due to focused efforts to enhance low observable maintenance such as the highly successful Alternate High Frequency Material program, it still faces increasing pressures to upgrade avionics originally designed over twenty years ago. The three-increment Extremely High Frequency Satellite Communications and Computer Upgrade program (EHF SATCOM and Computer Upgrade) seeks first, in Increment one, to upgrade the Spirit's flight management computers as an enabler for future avionics efforts. Increment two integrates the Family of Beyond-line-of-sight Terminals along with a low observable antenna to provide secure, survivable strategic communications, while Increment three will connect the B-2 into the Global Information Grid. Increment 1 of EHF SATCOM and Computer Upgrade is currently in Engineering and

Manufacturing Development and on track to begin procurement in Fiscal Year 2011 for fleet installations beginning at the end of Fiscal Year 2013.

The B-2 is also replacing the original radar antenna and upgrading selected radar avionics as part of the Radar Modernization Program (RMP) to change the radar operating frequency. RMP recently recovered from development challenges and has been approved to enter production. The Low Rate Initial Production contract for the first six production radar kits was signed on December 29, 2008, with the second and final buy for the remaining seven shipsets slated for later this year. Seven radar shipsets were also bought during development and are currently being installed in fleet aircraft to round out the twenty-aircraft B-2 fleet; the developmental units will be retrofitted to the final production configuration. Thanks in large part to congressional support, the RMP acquisition strategy was modified to include both life-of-type component buys to avoid diminishing manufacturing issues during the production run, and advance procurement to recover five months of the schedule lost while resolving the RMP integration issues during development.

B-52

The B-52 Stratofortress is our Nation's oldest frontline long-range strategic bomber, with the last airframe entering service with the United States Air Force in 1962. Given the expected service life of the aircraft, the B-52 airframes will be the longest operationally employed powered war machine in history, far surpassing the lifespan of any other single model land, sea or air weapon system. For more than 40 years B-52s have been the backbone of the manned strategic bomber force for the United States. The B-52 is capable of dropping or launching the widest array of weapons in the U.S. inventory, including gravity bombs, cluster bombs, precision guided missiles and joint direct attack munitions. Updated with modern technology, the B-52 will be capable of delivering the full complement of joint developed weapons and will continue into the 21st century as an important element of our Nation's defenses.

The Air Force has invested in B-52 modernization programs to keep the platform operationally relevant by adding satellite and nuclear survivable and secure wideband high data

rate communications; Advanced Targeting Pods - Sniper and LITENING; aircraft computer and data transfer unit upgrades; and integration of smart weapons to improve conventional warfare capability.

Together with the B-1 Lancer and the B-2 Spirit, the B-52 Stratofortress serves as a key component of the United States' long-range bomber force. It has earned respect as a highly capable conventional and nuclear combat platform during the Cold War, the Vietnam War, OPERATIONS DESERT STORM, ALLIED FORCE, ENDURING FREEDOM and IRAQI FREEDOM, and is currently deployed to the 20th Expeditionary Bomb Squadron in Guam to provide a continuous bomber presence mission in the Pacific. The B-52 continues to serve the nation well as it has during its long and distinguished history, and we have provided significant support across the future years defense program in recognition of its value.

Combat Search and Rescue Replacement Vehicle (CSAR-X)

The Combat Search and Rescue Replacement Vehicle (CSAR-X) program is the Air Force's next generation CSAR aircraft and one of the Secretary of the Air Force's top five acquisition priorities. The Air Force intends to replace 101 aging HH-60G Pave Hawk helicopters with 141 CSAR-X aircraft.

The CSAR-X program is currently in source selection with an expected contract award targeted for Spring 2009. The desired initial operational capability (IOC) is the third quarter of Fiscal Year 2013 with a required IOC by the second quarter of Fiscal Year 2015. There are nine KPPs in the August 2005 JROC approved CSAR-X Capability Development Document. They are combat radius, deploy-ability, net ready, payload and cabin space, rotor downwash, self defense, vulnerability reduction, RF threat disengagements, and EO/IR threat disengagements; for which all thresholds must be met in source selection. Additionally, in December 2008, the DoD Inspector General released a report on the audit of the requirements supporting the Air Force process, citing the "Air Force properly vetted CSAR-X KPPs through the JROC validation and approval process, in accordance with DoD and Air Force acquisition guidelines."

Closing

We are building a 21st Century Air Force prepared to succeed – strategically, operationally, and tactically. Our highly capable and lethal aviation programs provide Global Vigilance, Global Reach, and Global Power. These capabilities are critical today and for the future Joint force. The Air Force is appreciative of the support of this Committee to our Airmen and our combat aircraft acquisitions programs

REMARKS OF MR. MURTHA

Mr. MURTHA. Well, thank you very much. Just a couple things that I wanted to comment on.

One, we talk about a stable ability to buy for industry and for the military. Last year, we in our negotiations with the Senate had to cut out one E-2D, the Advanced Hawkeye. Since you use this in Iraq, the Navy uses that Hawkeye, we are going to see if we can work that out in the supplemental, since that is something that is used in the battle group flying in the war zone.

Second is the F-22s. We need an answer. I never believed they would build the 600—some that they said they were going to buy in the first place. One of the complaints I have had over and over again is the military consistently asks for more than they know they are going to get because it cuts the price down when you average it out. But we have to pick up the tab.

But we do need as soon as possible answers on these things. And I know it is not your fault, I know it is OSD and OMB that are making the decisions now. But it makes it very difficult for us to do a supplemental, do another supplemental, and then at the same time come up with a base bill.

So I don't know what kind of influence you two have on the process, but we need some answers. We were supposed to get them last week, we were supposed to get them this week. The Staff Director now tells me it will probably be next Friday before we get the details so we can go forward with recommending to the subcommittee. Bill and I have always counseled very closely before we recommend to the subcommittee and then go to the full committee with this supplemental.

So we know you are in a difficult position, but we need the information so we can do a more thorough job in making sure we are getting the most cost-effective programs.

Mr. Young.

GENERAL AIRCRAFT PROGRAM STATUS

Mr. YOUNG. Mr. Chairman, I am looking for some good news today. As I read your testimonies and I listen to what you tell us, I am not sure there is a lot of good news here. We hear about the Joint Strike Fighter having developmental problems and cost overruns. You are talking about buying more Joint Strike Fighters, but the program is not as robust as we would like it to be. F-22, as Chairman Murtha has just said, we are not sure where you are on the F-22 program. The B-52 is pretty old. We are talking about trying to make it live a little bit longer because B-1 has problems, B-2 has some problems.

Tell us some good news.

Admiral ARCHITZEL. Well, if I could, I believe the progress we need on the Joint Strike Fighter, as an example, is absolutely critical to the Navy of the future. We need that program to IOC in 2012 for the Marine Corps, the STOVL variant, and 2015 for the Navy. We built our force upon that, and indications as we move forward now is while the JSF variants have slipped somewhat in production, as we go forward the quality has been good. We need to keep that stable and keep going with the program. As we get

into it, I think we will find more and more stability and better performance as we get deeper into the program, sir.

That is part of what we need to do to recapitalize, if you will, our Strike Fighter force. These are the fifth generation fighters that we will need in the future and we need to get stable production going. Where we see that stable production, we see success stories.

I believe you will see the benefit of stable production in the Hornet case of the E and F, as a success story. That program, and its progression into the Growler where we melded it into the existing Hornet multiyear, and took advantage of building off the F-18F Lot 30, missionizing it to the Growler. This was a significant step forward that allowed us to bring that program forward.

The P-8 is another example of what I think is a pretty significant step. This is the first time we have taken and produced on a commercial line, a militarized variant of a Boeing 737, which is the replacement aircraft for the P-3. That aircraft, as I mentioned, has taken only 9 years from concept development to fielding and when you look at some of these other timelines is pretty significant, sir. It is moving along well. It is on cost. It is meeting its objectives as we go forward. So there is another example for you as well.

General SHACKELFORD. Mr. Young, if I could comment on a couple of programs. First of all, in the area of urgent operational needs, which, granted, are not generally new weapons systems, but they are improvements to existing weapons systems, we have had an incredible amount of success over the last year providing urgent needs to the warfighter, to enhance the capability of weapons systems, be it the targeting pods on the B-1 with the laptop interface in the cockpit as an interim step towards integration; be it secure or beyond-line-of-sight radios to the F-15Es, the A-10s and the F-16s that are operating in the high terrain of Afghanistan; be it the joint air-dropped, precision air-dropped system that is essentially a GPS-guided pallet for delivery of supplies; or fielding of variations of weapons, typically laser-guided/GPS-guided weapons combined to give us a moving target capability.

But beyond that, when you think about something like the F-22 program, we have a mature production line for the F-22 right now.

Mr. MURTHA. Say that again? Move your mike closer.

General SHACKELFORD. Is that all right, sir?

We have a mature production line for the F-22 that is delivering aircraft on or ahead of schedule, and many of them are coming along as zero defect aircraft. As we get that aircraft fielded and into the hands of the young aviators who are now learning how to employ that weapons system, we are discovering all kinds of new things about what we can do with the F-22, which then we have to take and follow back into our tactics, techniques and procedures to most effectively take advantage of what we have.

The F-35 is at a very critical point right now because we are somewhat pass midway in the system design and development phase, but we are right on the ragged edge of beginning the flight test program with all the flight test aircraft, the developmental test aircraft to be delivered out this year.

When it comes to a prediction about what the future of the F-35 holds, those predictions are based on assumptions. Those as-

assumptions typically are based on some kind of best practice that we have in our cost estimating or scheduling paradigms. We will find out whether those assumptions are valid or not beginning this year as those flight test aircraft are delivered.

Meanwhile, that program does have an incredibly robust laboratory and development lab infrastructure, including that cooperative avionics test bed, which is going to go a long way towards maturing the avionics and bypassing many of the problems we have had on earlier weapons systems and their development, taking care of that risk reduction early so that we are surprised by fewer things as we move forward into the program.

Mr. YOUNG. Well, I thank both of you for those reports that appear to be somewhat positive. But what worries me, and I will be very honest with you, there are some in the Congress and some in the government who have stated openly that they believe that some of these aircraft that we are talking about are Cold War relics and that we will never need them again. Of course, nobody can be sure of that. It is not only important, but it is absolutely essential that we are able to maintain complete control of any air over the battlefield.

So I think you will find this subcommittee is prepared to do whatever it is that we need to do to be supportive of decisions you make, but it is important that you do make those decisions. I know that sometimes the decision is not entirely up to each one of you as individuals, but it seems like we are just going around in some circles here. Maybe that is just a feeling that I have and maybe that is totally not accurate.

But we need to keep these airplanes going. We need to get them into robust programs. We need to get them into the inventory. If we never have to use them, we should be thankful, but in the event we have to use them, we sure as heck better have them.

Anyway, I am here to support keeping Navy aviation and United States Air Force more capable than ever. We will have some specific questions as we go through the hearing this morning, but those are just my general thoughts.

I thank both of you very much, and thank you, Mr. Chairman.

F-22 AIRCRAFT

Mr. MURTHA. Go to the F-22 again, because last year we put money for advanced procurement in to make sure the line didn't come to a stop. It sounds like you are saying the line is going well, and our concern had been that if that line closed down and we made the wrong decision, then it would be very expensive down the road.

What do we have to do this year to make sure until a decision is made? If they keep putting this decision off, is there something we need to do in the supplemental?

General SHACKELFORD. Mr. Chairman, the Air Force obviously supports the Secretary of Defense's position on bridging the production line until a decision can be made attributable to the new administration, and that in fact is what is in place right now. The Defense Department—

Mr. MURTHA. Let me make sure from a technical standpoint this subcommittee understands. You are saying we will need more money this year in order to have the bridge?

General SHACKELFORD. I am talking about the fiscal year 2009 funds to take care of the four aircraft that are currently in Lot 10, the proposed Lot 10. The action was taken between last November and just a few weeks ago to make sure that the production line for those four aircraft is preserved.

Now, this is advance procurement funds so we are not actually building those aircraft yet.

Mr. MURTHA. I understand.

General SHACKELFORD. It is advance procurement funds, to lay in the initial supply chain, if you will, for the components that will be built up eventually into F-22 aircraft.

Mr. MURTHA. So the subcontract is a problem. If you don't have that money, the subcontractors start to go away. Is that basically the technical problem?

General SHACKELFORD. It is actually the supplier base before you even get to the subcontractors.

Mr. MURTHA. That is what I am talking about, the supplier base, which is the subcontractors, that if they don't have the advance procurement money it dries up. We got the same problem as if we shut down the line and started it back up again.

General SHACKELFORD. Yes, sir. If we reach a point where they do not consider the future of the program to be solid enough for them to continue building whatever component they are providing, then we wind up with a break in that supplier base, and that is what we are protecting right now for those four aircraft.

Mr. MURTHA. Mr. Visclosky.

JOINT STRIKE FIGHTER ALTERNATE ENGINE

Mr. VISCLOSKY. Thank you, Mr. Chairman.

General, I want to ask about the alternative engine for the Joint Strike Fighter. For the last 3 years, the committee has directed the Department to fund an alternative engine and has provided about \$1 billion. In each year the Department has elected not to follow the direction. With 2,000 jets, you don't think competition would help as far as pricing and reliability?

General SHACKELFORD. Sir, while the Air Force and certainly the Defense Department support the notion of competition as being good, particularly in the manner of saving dollars for the taxpayer, the business case analysis that we have at this point, that the Defense Department has supported, shows that we would not be saving funds by bringing on that second engine. So in spite of the potential for competition, the business case doesn't support it at this point, and therefore the Department doesn't support the second engine.

Mr. VISCLOSKY. Could you explain the rationale of that report basically? What is the thesis?

General SHACKELFORD. There are several elements that go into that. Part of it is the investment required early on for the continued development of the second engine. Those dollars, were they sourced out of the existing program, would be at the expense of dollars going towards production of aircraft which has a side effect of

increasing the unit cost on an annual basis for those aircraft, making them less affordable at that time.

Likewise, the learning curve, which has a direct impact on the unit cost of the engines, be it the primary engine or an alternate engine, gets shallowed out sooner. Therefore, we don't save as much from a learning perspective in the increased production of the original engine. When you factor those items together, the cost-benefit does not equal a favorable number.

Mr. VISCLOSKY. Am I correct in understanding that the engine that will be used to power the Marine Corps variant of the Joint Strike Fighter experienced significant problems over the last year which delayed the first flight?

Admiral ARCHITZEL. The problems experienced with the engine related to blades have been resolved and the engines are now in the BF-1 and BF-2 and both are proceeding in flight testing. The Pratt & Whitney engine issues and the root causes of the blade failure were resolved last year.

Mr. VISCLOSKY. Is the contractor still waiting for a certified engine?

Admiral ARCHITZEL. On the F-135, on the Pratt & Whitney engine, it continues to go through tests on 11,000 hours on 16 engines and the program continues to move forward on the development of that engine.

Mr. VISCLOSKY. Is the contractor waiting for a certified engine?

General SHACKELFORD. The engine is certified. It is in the aircraft and the aircraft is on the hover pit beginning initial evaluations in the short takeoff vertical land mode, not yet having flown in that mode.

Mr. VISCLOSKY. So the engine is certified to begin short takeoff and vertical landing testing?

Admiral ARCHITZEL. Yes, sir, it is.

Mr. VISCLOSKY. Thank you very much. Thank you, Mr. Chairman.

Mr. MURTHA. Both the House and the Senate feel very strongly about the alternative engine. I can remember years ago when Pratt & Whitney was having big problems with one of their engines, we put GE engines in and that saved the day. We had an alternative to it. That is why this subcommittee feels so strongly, our experiences. There are times when you need not only competition, but you need something out there. So we feel very strongly about this.

I know your answer was well, it comes out of production. Well, that is not the point. At some point the competition we feel in the long period of time, as long as these airplanes run, as long as we have these programs going, that we feel it would be actually cost-effective to have the competition. So we expect the Air Force to eventually build this alternative engine.

Mr. Frelinghuysen.

JOINT STRIKE FIGHTER COMBAT CAPABILITY

Mr. FRELINGHUYSEN. Maybe competition—good morning, gentlemen—from another perspective, what the Russians are doing, what the Chinese are doing, Indian capabilities. Some of the things that happened in the Taiwan Strait in just the last week or so, I don't

like the notion that we would ever be in a position where we wouldn't be able to exert our superiority.

The Joint Strike Fighter, can you talk a little bit about its dogfighting ability, either of you? I still have a good memory of going out to Langley, and obviously I think the Raptor is a remarkable plane but the Raptor has stealth. The Joint Strike Fighter has less stealth. But I am interested in sort of air-to-air combat capability vis-a-vis what our adversaries have in terms of capabilities.

General SHACKELFORD. Sir, the F-22 and F-35 are really complementary.

Mr. FRELINGHUYSEN. I know they are complementary. They are part of our team.

General SHACKELFORD. What the F-35 lacks that the F-22 has is altitude capability, speed capability, and a certain amount of agility. And while it has an air-to-air weapons capability in the internal carriage mode that is nothing to shy away from—

Mr. FRELINGHUYSEN. How many air-to-air missiles does the Joint—

General SHACKELFORD. Internally, four AIM-120 AMRAAMs.

Mr. FRELINGHUYSEN. And that is internal?

General SHACKELFORD. Internal, yes, sir.

Mr. FRELINGHUYSEN. So for additional capability you would have to have things on the outside of the aircraft, is that right?

General SHACKELFORD. Yes, sir. To add the heat seeking missile, the AIM-9X, that would be external carriage.

Mr. FRELINGHUYSEN. And when you do that, obviously you have a bigger footprint, I assume, right? Whatever the stealth capabilities is you somewhat minimize?

General SHACKELFORD. Any change to the outside of the aircraft has a negative effect generally on low observables.

Mr. FRELINGHUYSEN. So how does that aircraft compare with, shall we say, the foreign competition, our likely adversaries. What are the Russians and Chinese doing? Because the issue here to me is that there are a lot of what we call integrated air defense systems out there, and I just sort of wonder what the capability of the Joint Strike Fighter is vis-a-vis those types of defense capabilities that our adversaries have and that seem to be proliferating?

General SHACKELFORD. Yes, sir. The comparative nature with the foreign weapons systems is something outside of my specific area. So we could get back to you with a direct comparison, if you would like.

[The information follows:]

The F-35 Joint Strike Fighter Lightning II will achieve an initial operational capability with the Air Force in Fiscal Year 2013, joining our active force to complement America's other fifth generation fighter, the F-22 Raptor. Fifth generation aircraft combine the attributes of stealth, maneuverability, multi-role, and sensor fusion to allow them to gain access into denied airspace against today's—and tomorrow's—air and ground threats projected to be possessed by near-peer potential adversaries. While both possess the attributes of fifth generation fighters, the F-22 is optimized for air dominance through unparalleled speed, acceleration and maneuverability, while the F-35 is optimized for global persistent attack through increased payload and range.

General SHACKELFORD. From an acquisition perspective, the things that the F-35 brings, the stealth capability is important because the foreign competitors do not have that. The integrated avi-

onics are important because the foreign competitors haven't reached that stage yet. When you combine those things with—particularly the stealth with the avionics with the weapons systems—

Mr. FRELINGHUYSEN. You are talking about the Joint Strike Fighter here?

General SHACKELFORD. The F-35, yes, sir. When you combine those things, you do put the F-35 in an advantageous sense, even if it is in a maneuvering capacity on par with an international competitor, because he will be able to engage prior to a visual fight where the maneuverability becomes more significant.

Mr. FRELINGHUYSEN. But if you add things that are not internal, you obviously have a bigger—you know, the air defense systems have some ability to sort of spot you, don't they?

General SHACKELFORD. The air defense systems, the surface-to-air missiles, particularly the higher end, newer air defense systems that are proliferating around, will have a much more difficult time finding an F-35 than any fourth generation fighter.

Mr. FRELINGHUYSEN. Even with all the add-ons that are not internal? Your footprint isn't larger?

General SHACKELFORD. Once you reach a phase of the battle where you can afford to add external stores to the F-35, then those integrated air defense systems are less significant. The early portions of the battle are when the clean airplane—that is, its smallest signature, are most important. Those are the times when you would prefer not to add external stores.

Mr. FRELINGHUYSEN. All right. Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Bishop.

F-22 REQUIREMENTS AND PERFORMANCE

Mr. BISHOP. Thank you very much, gentlemen.

General Shackelford, I know you can't speak for the fiscal year 2010 proposed budget, but we have seen some press reports, some quoting the Chairman of the Joint Chiefs, discussing a new number for the F-22's combat requirement of at least 243 to 250.

Can you discuss this new so-called moderate risk number and whether it is backed up by some classified campaign-based analysis? In an unclassified manner, obviously, can you explain why the Air Force needs more than 183 in the tactical air fighter mix? Some people have suggested that the F-22 and the F-35 do the same thing. Of course, the Air Force's response is that they are complementary and they are different.

Can you explain how they are different and how they are complementary in the context of your need for additional F-22s?

General SHACKELFORD. Yes, sir. Thank you for your interest in those fifth generation fighters.

The Chief of Staff of the Air Force has previously said that 381 are too many and 183 are not enough. What comes out as the new number he has reserved the right to bring to the Secretary of Defense, and I expect some number to come out of the budget when it is released next month.

As to how we judge those numbers and over time how we have changed the numbers, a great deal of analysis goes on in the background using scenarios that have various assumptions as to what

is going to take place in the scenario and what force structure is brought to that scenario. So it is more than just a single weapons system scenario, and in this case would include both F-22s and F-35s.

As that analysis takes place, part of the calculus, if you will, is what level of risk is there in accomplishing the national military strategy given those scenarios and how they interact. So depending on how you judge what is acceptable risk, that will lead you to some number and that number, that sort of number is what contributes to changing those requirements.

Mr. BISHOP. What is the difference in the F-22 and the F-35?

General SHACKELFORD. Both aircraft bring stealth technology, integrated avionics, advanced weapons systems, maneuverability. The F-22 is optimized from a super-cruise maneuverability or agility perspective and sensor suite for air-to-air battle. It has air-to-ground capability in a supplemental sense which is growing through the modernization program.

The F-35 has less performance, but a much different sensor suite optimized for detecting and identifying targets on the ground with a much larger weapon load, albeit external at some point once you get to a phase in the battle that you can afford to carry external stores.

So complementary in nature that both of them have the ability to take on an integrated air defense system with the advantage really being initially for the F-22. But as we move farther into that battle, the F-35's strengths in terms of persistent ground attack will start to carry the day in terms of supporting the rest of the joint force.

CSAR HELICOPTER

Mr. BISHOP. Let's switch gears for a moment and talk about the combat search and rescue helicopter program. The Air Force has said that the combat search and rescue helicopter replacement program is the second highest priority, behind only the tanker replacement program.

What is the status of the request for proposals, what is driving the need for the new combat search and rescue helicopter, and will these assets continue to be low density high demand, or will we buy enough and prove them sufficiently so they become part of the Air Force's expeditionary force?

The Secretary of Defense has started to use the combat search and rescue assets to assist in medical evacuations in Afghanistan. How does that differ from the traditional combat search and rescue mission, and how will this impact the number of aircraft that are required by the Air Force as some of them will be retasked for medical evacuations?

General SHACKELFORD. The Combat Search and Rescue X helicopter program, CSAR-X, is in source selection right now. We are expecting a contract award late this spring and it is moving forward. That program replaces 101 HH-60Gs, our present CSAR helicopter, with 141 aircraft, bringing to mind two issues; sufficiency in numbers and capability. The number changed from 101 to 141, intended to get out of the low density, high demand category. The

capability changes for the new helicopter intended to address shortfalls that the current HH-60G has in performing the mission.

Mr. BISHOP. What are those shortfalls?

General SHACKELFORD. These would be self-protection, the load out it can carry, how it handles higher elevations as we are seeing in the Afghanistan type of theater, range. So those are all addressed through this acquisition program.

Mr. BISHOP. So you have longer range in the new ones?

General SHACKELFORD. Yes, sir. When it comes to the role of combat search and rescue, this is a long-time role that the Air Force has taken on, and it differs from the use of helicopters in, say, a general utility role. Typically the medical evacuation mission is more of a general utility type of role for any helicopter and they are so tasked either out of the Army or the Air Force.

Combat search and rescue is a riskier, much more offensive and self-protective type of mission, and today's CSAR helicopters are called upon in the theater when there is a medevac mission that is in a higher risk type of context, maybe low visibility or night, for instance, where the special equipment on board those helicopters and the special training of the personnel is valuable for personnel recovery.

Mr. BISHOP. Thank you.

Mr. MURTHA. I appreciate that line of questioning, because this Committee has been in the forefront of trying to make sure you have what you need, and we just found out it takes 72 minutes to get an injured person on average in Afghanistan to the hospital, and therefore our death-to-injury ratio is much higher in Afghanistan than it is in Iraq.

We went out to Nellis, I sent staff out, I went out to Nellis, and we put \$100 million to upgrade. We know the Air Force is involved in trying to help the Army in increasing the number of medevac helicopters in Afghanistan. So we are in the forefront on this issue. We think it is as important as anything you can possibly do.

Mr. Kingston.

TACTICAL AIRCRAFT SHORTFALL

Mr. KINGSTON. Thank you, Mr. Chairman. I have a few questions for the Admiral and then one for the Air Force.

The first question, Admiral, and I will just go through them, you say you have a shortfall of 125 aircraft. I was wondering how you get those numbers, just generally. For example, does it include your grounded aircraft? You have 39 P-3s that are grounded. And then I guess along that line, you have 157 P-3s. How many does it take to track a sub? How do you decide how many P-3s you actually need? Also, did we ever figure out what the Chinese learned when they seized the P-3?

Then finally, do you feel like the Prowlers are going to be okay for 5 more years, 10 more years, or is that something we should start focusing on?

Then, General, I had a question for you on the F-22 on the performance-based logistic contracts. Where will that work be done and what is the cost-effectiveness of that? How much money does that save the taxpayers to have it done by a contractor? As I understand it, that business model did not come before the contract was

signed, then the contract was signed and then we are working up the cost-effectiveness of it. And that is not an unfriendly question. I just wanted to know more about it.

Admiral ARCHITZEL. Congressman, thank you for the questions. First, let me begin by saying as we are here today, future force requirements are under review and will be subject to further determination.

But to your question you raised specifically addressing a shortfall, you also talked about 125 aircraft and then mentioned P-3s. If we talk about shortfall, the Strike Fighter shortfall will be one piece. We have shortfalls in other areas. For example, P-3s, as you get redstripes to P-3s, which is basically taking P-3s offline due to fatigue and other things in life, we need to do additional maintenance on them. As we take those aircraft offline, that creates a shortfall.

Let me address first, again emphasizing that future force structure is under review, but as an acquisition person I will address your question specifically so as not to be evasive.

In the FY2009 President's Budget submission, there was a force structure in place for tactical aviation. That involved supporting 11 carriers, 10 air wings and three Marine air wings. When you look to that force and project it forward with the current burn rate and projected burn rate of the aircraft on life cycle that is attendant with them, we did predict or project it out to be at that time 125 aircraft, tactical aircraft, short.

Your next question was how would you make that up? It is through a combination of factors, where we would first ensure the ramp rate of the JSF to meet our 2012 and 2015 IOCs for the Marine Corps and the Navy. It is absolutely critical that we do that, and the numbers that are supported within the JSF program office.

The second thing we have to do is manage our existing inventory. The F/A-18 E/F program today, as I mentioned, is executing extremely well. The program of record for that aircraft would have 23 F/A-18 F/Fs in the 2009 budget, and additionally the program would buy out at around 506 total F/A-18 A/B/C/D aircraft. When you add that to the existing F/A-18 A/B/C/D legacy Hornets, which the number of those is around 600 and some odd number of aircraft, you say well, do you even have a shortfall?

These aircraft, the Hornets, when they first came online, had a notional life of 6,000 hours. We have done center bill replacements on Lot 17 and below Hornets to bring them up to be able to fly to 8,000 hours. Every time we look at extending service life, we do so through a service life assessment program. That feeds into a service life extension program. We looked at whether we could get those aircraft up to 8,600 hours. To do that would require an investment of about half a million dollars per aircraft we estimate, and would give you about 2 years additional flight service. By that, I mean you are figuring the notional fly rates of around 30 hours per month per aircraft. If you do the math it comes up about 2 additional years.

To fill the short gap with legacy you would have to go to additional hours. The question was how far could you go with the Hornets in lifetime. There is a SLAP analysis conducted to investigate going from 8,600 to 10,000 hours. This is a significant investment

that would take a significant amount of maintenance and depot work to bring those aircraft up to speed. This effort is not funded, that is not in the plan today; but it is being looked at to see what we do if need be.

The third thing we do is manage by bureau number on these aircraft today. We know exactly what the fatigue life is for each one of these airplanes. When we first started into the hornet looking at fatigue life, it was wing-root. We were concerned about traps and cats, how many landings we could get in these airplanes. We took that from 2,000 up to 2,700. Then we got into things like wing-root fatigue life issues, where we had to look into airframe concerns and how we resolve those concerns to get additional hours. All those go forward as we do that. We look at every individual jet, what it has on it.

For example, if we had Marine Hornets that had cats and traps because they have been more shore based than at sea, but had limited flight hours, we could exchange them with the Navy and Marine Corps. The same thing with the Navy. We might have more hours left, but not cats and traps on them because they have been at sea. We could then look to share those as well, to bring that and fill that as much as we could as we go forward. That is how you would manage the force to cover that shortfall.

P-3 FORCE STRUCTURE

Mr. KINGSTON. I know that that is a lot longer answer than I figured. That explains it. I got to back off though and see if I could get you to talk about the Chinese and the P-3, and then if we have time, Mr. Chairman, get to the F-22 question.

Admiral ARCHITZEL. To the P-3 question, you had on force composition. That is dictated by combatant commanders' needs throughout the world. You go through in various theaters of operation you have and that is what dictates our force structure for the P-3. The P-8 is a planned replacement of the P-3 where the program of record would put us at a 108 aircraft requirement and that is again based on the training and equipping and providing for those squadrons as they go forward.

You said was there intel. I can take that for the record about the impacts of the EP-3. That episode, I can certainly come back with that, sir.

[The information follows:]

Regretfully, due to the sensitive nature of this subject, I am unable to provide a response in this forum. However, a briefing could be made available to you if so desired.

ELECTRONIC ATTACK AIRCRAFT

Admiral ARCHITZEL. Your last question was on Prowlers. We will continue to maintain our Prowlers as we go forward. The Navy's position is we are bringing on the Growler, which is a tremendously capable airplane. It has 88 envisioned in the program of record. It will replace, as I mentioned, our squadrons of Prowlers in the Navy today. The Navy is also decommissioning its expeditionary squadron, so we will be at essentially 10 Growler squadrons as we come forward with IOC at the end of this year.

Then what will be the future for the Marine Corps. As the Navy brings the Growlers on, the Marine Corps will keep the Prowlers in service until sundown of 2019 for them. The Marine Corps are going to rely on the JSF in terms of STOVL variant. We are also kicking off a study this year, funded in the 2009 budget which is an AoA for the next generation Jammer. That is their plan as they go forward.

Mr. KINGSTON. Okay.

F-22 PERFORMANCE BASED LOGISTICS

General SHACKELFORD. Yes, sir. Thank you for your question on performance-based logistics. That area in general, the supply chain is one that is ripe for continuous process improvement, and performance-based logistics contracting is the fruit of some of that improvement. If I recall correctly, the F-22 performance-based logistics contract was a DOD award winner this past year for a success story.

As to the details that you are asking for there, that lives more in the sustainment world than the acquisition world. So I would ask that you let me take that for the record and get back to you in the detail you are looking for.

[The information follows:]

The Product Support Integrator (PSI) role includes responsibilities such as supply chain management, sustaining engineering, technical data, and customer support. The lead PSI is Lockheed Martin in Marietta, GA, with support from Lockheed Martin in Fort Worth, TX and Boeing in Seattle, WA, Pratt and Whitney, located in Hartford, CT, is the engine PSI. The current PSI strategy was the result of the program's evaluation of request for information responses from industry and Ogden Air Logistics Center in 2005 and endorsed by the Rand study in 2006. A business case analysis evaluating alternative PSI strategies is currently underway and will be completed this year. Study results will be integrated into the out year F-22 Performance Based Logistics (PBL) strategy.

Depot level maintenance is another key aspect of the PBL contract. This work is being accomplished in both contractor and Air Force depot facilities. The majority of F-22 depot workload is transitioning to Air Force depots over the next several years in order to meet Title 10 Core and 50/50 requirements. Oklahoma City ALC is partnered with Pratt and Whitney on the F119 engine and is doing both overhaul and repair work. Depot level aircraft modifications are being accomplished at Ogden ALC, UT, and Lockheed Palmdale, CA. The two locations are roughly equivalent in capacity. Airframe component workloads are being transitioned to all three Air Logistics Centers located in Oklahoma City, OK; Ogden, UT; and Warner Robins, GA, based on the assigned technology repair center designation. To date, eight organic activations are completed to include wheels and brakes, doors and panels and generators. Eight more activations are planned for 2009 to include fuel pumps, environmental control system components, and on board oxygen generation system. Projections show 75% of F-22 depot maintenance will be performed in organic depots in 2011 and 84% by 2012.

In 2007, Rand conducted a cost benefit analysis off the proposed strategy prior to the PBL contract award. The RAND study results confirmed Lockheed as the PSI in 2008 and 2009 as the only viable option in the near term. The study stated that over a five year period organic and contractor PSI costs are comparable within study assumptions and margins of error. For depot level workloads, each activation is preceded by a comprehensive depot partnering assessment which defines a cost effective activation plan of the subject workload. These assessments have shown that recurring costs at contractor and organic depots are comparable.

Based on the 2007 RAND study, there were no significant savings, contractor and organic costs were comparable. Depot source of repair decisions are primarily based on core and 50/50 requirements.

The 2001 Quadrennial Defense Review mandated Performance Based Logistics implementation within DOD. The F-22 program took a number of steps to flesh out the details. The first was a sustainment alternatives study (2004) which considered a broad scope of strategies. This study recommended implementing a public/private

partnership strategy with the possibility of future competition as the weapon system matured. In 2005, the program office released a request for information to determine the potential for competition and better understand program options. Multiple responses were received including Ogden Air Logistics Center. All were evaluated by an Air Force team and they concluded Lockheed Martin was the only viable source for overall weapon system sustainment until weapon system maturity (100,000 flight hours, approximately 2011). A similar strategy was developed for Pratt & Whitney on the engine except they were to interface with Lockheed Martin, the weapon system PSI. In 2007, RAND conducted a cost benefit analysis off the proposed strategy prior to PBL contract award. The RAND study results confirmed that the Lockheed Martin PSI approach was the only viable option in the near term. The study stated that over a five year period organic and contractor PSI costs are comparable within study assumptions and margins of error. The study supported the proposed F-22 PBL strategy and concurred with completing a full budget cost analysis when the program was more mature. The program office kicked off a budget cost analysis in August 2008. The budget cost analysis is evaluating several sustainment alternatives across the continuum between full organic and full contractor PSI. Completion of the budget cost analysis is expected in late 2009.

Mr. KINGSTON. Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Hinchey.

STRIKE FIGHTER SHORTFALL

Mr. HINCHEY. Thank you, Mr. Chairman.

Admiral, General, it is very interesting to be here with you and listen to your answers to these questions and the things that you are saying.

I just wanted to follow up a little bit on the tactical shortfall, first of all, for the Navy and Marine Corps, which as I understand it is continuing to decline. That shortfall is going up in fact. More and more aircraft are in need and not being there to deal with the circumstances that they have to deal with. The number we are being given is 125. The shortfall is about 125 in the context of this fiscal year. So, that means it is likely to continue to increase over the course of the end of this fiscal year and into next, and that primarily the reason for the shortfall is the delay in the F-35, which is an aircraft of substantial priority and which is going to take on a lot of this responsibility. I assume all of that is true.

What is delaying the F-35? Why is it not coming in as quickly as it was anticipated?

Admiral ARCHITZEL. Thank you for the question, Congressman Hinchey. Without repeating myself on the shortfall, again, the force structure and composition of the future is under discussion today. I will caveat all of what I say with my discussions of a Joint Strike Fighter is based on what was submitted for the PB 2009 budget.

I would emphasize the JSF as we go forward, as an example, we need to have the ramp rate for the JSF as it is coming now into its production and we see that things are a few months behind even today from what we thought they would be. We need to get them forward. The quality is excellent. For example, in other areas like software development, we should be about 69 percent, it is about 70 percent. That is tracking well. There are areas of the program that are doing extremely well. We want to continue to emphasize that.

What matters is to get into production ramp rates that delivers a stable quantity that we can count on to deliver forward. The more you slide out to the right, then obviously we are not having

the number to fill our air wings as we go forward. We have to plan accordingly.

I think the indication last year was when we had the fiscal year 2009 budget, it had a long lead for one carrier variant, for example. We requested four and it was basically reduced to one. Subsequently, the Congress took action to put an Above Threshold Reprogramming (ATR) on, official reprogramming to return those three aircraft, on long-lead material buy for Advance Procurement (AP), and that allows us then to not have to slide the IOC as a Navy variant, as an example. That is critical.

To answer your question, it is essential that we maintain the future procurement of the JSF to fill our air wings and that we manage very closely the legacy fleet to match up with that.

Mr. HINCHEY. We fully understand that. And part of the situation that is causing concern, of course, is the additional pressure that is put on the existing airplanes. As an example of that, the F-15, which fell apart while it was in flight, I think it was sometime last year. So whether or not anything like that is likely to occur of course is a significant issue that we have to deal with, and it is one of the reasons why I am sure you are doing everything you can to press for that F-35 to move as quickly as possible.

Admiral ARCHITZEL. Yes, sir.

COMBAT SEARCH AND RESCUE HELICOPTER

Mr. HINCHEY. I just wanted to ask a question about the combat search and rescue helicopter that you were talking about a few moments ago. You said that the contract for that is going to be coming into effect sometime later this spring.

General SHACKELFORD. Yes, sir. Our intent is to award the contract late this spring.

Mr. HINCHEY. What do you anticipate about that? Do you know where the contract is going and what is the context of that contract? How rapidly do you anticipate that these new combat search and rescue helicopters are going to be put into play?

General SHACKELFORD. In terms of timing, the initial operational capability for the helicopter is intended to be between the third quarter of fiscal year 2013 and the second quarter of 2015. So a contract award this spring will lead to about four years from now an initial operational capability.

Mr. HINCHEY. Okay. So you are feeling comfortable with that?

General SHACKELFORD. Yes, sir.

Admiral ARCHITZEL. Congressman Hinchey, one thing that is similar but not exactly the same in terms of combat SAR, would be the Navy's recapitalizing on its combat SAR assets on the carriers and the Expeditionary Strike Groups (ESGs) and the carrier strike groups. That was mentioned before from Mr. Young, as a good news story we can hear. The Romeo and Sierra programs are doing extremely well. The Romeo, which replaces our anti-surface and anti-submarine helo assets at sea, 30 aircraft delivered, and as we go forward this year 254 is in the program of record.

The Sierra is our combat SAR for the carriers and the expeditionary strike groups as you go forward, and those are part of a multiyear with the Army that produces the 60 series in general, both the Romeos, the Sierras and the Army. That multi-year has

been extremely beneficial. As we go forward, we are about 18 sustaining rate on the Sierras, but that will deliver our capability there. Not the same helo, but it is a combat SAR. When you mention the combat SAR, that is what the Navy is moving on, and that aircraft which will that need for us.

Mr. HINCHEY. I thank you very much, gentlemen.

Thank you, Mr. Chairman.

Mr. MURTHA. Ms. Granger.

JOINT STRIKE FIGHTER PRODUCTION

Ms. GRANGER. Thank you. This is a question to both of you gentlemen.

General, given the Air Force's fiscal year 2013 IOC requirement and the Marines is fiscal year 2012 and the Navy fiscal year 2015, how important is it that the F-35 production stay on track and be allowed to ramp up efficiently to high rate production in order to stay affordable?

General SHACKELFORD. Ma'am, thank you for that. It is absolutely critical that the F-35 stay on track. Presently the Air Force plan is to ramp to 80 for the conventional takeoff and landing F-35A by fiscal year 2015. The production line can handle as many as 110, were we able to get to that, or a total of roughly 240 for the entire A, B and C production line. Were we able to ramp to 110 in the Air Force, that would deliver the Air Force's complement of presently program of record 1,763 seven years early, and it would save the combined program \$13 billion.

Affordability is one of the pillars of the F-35 program. The more we can keep it on track, the more we can buy at economic rates, the more economical and affordable it will be.

Ms. GRANGER. Thank you. Admiral?

Admiral ARCHITZEL. Congresswoman Granger, I can only echo those comments. As we said before, the JSF is critical to the Navy and the Marine Corps. As the program of record, for the Department of Navy it is 680 aircraft. How we split that as we go forward in the force structure will determine what the exact numbers fall out to be, between the STOVL and carrier Variant. But in the 2009 budget with the LRIP 3, seven STOVL long-lead with additional advance procurement for 14 in the budget rather, and also as I mentioned the long-lead for the CV variant. So it is absolutely critical that we maintain those on track for the 2012 IOC for the Marine Corps and 2015 for the Navy.

Ms. GRANGER. I have a follow-up question also having to do with cost.

The GAO annually expresses concerns about concurrency in programs, and while it is true there is an overlap in production in the F-35, isn't it also true that this makes the programs more affordable, and the lessons learned in F-22, as well as significant investment in laboratory and infrastructure, have significantly reduced the risk of overlap in the F-35 program?

General SHACKELFORD. Ma'am, when the F-35 program first started back in 2001, the acquisition strategy was recognized as having a fair amount of concurrency, and that was accepted by the enterprise, if you will, as an opportune way to move the weapons

system forward. That, granted, provides a certain level of risk in terms of production before we are complete with development.

On the other hand, what it allows us to do is take advantage of reduced prices, unit costs, by increasing the production not only in the program and—perhaps in the purist sense, if you try to actually split the development and the production, the implications for industry in terms of a break in production and the expertise required to build the airplanes would be catastrophic in terms of the cost implications.

Now, to mitigate that in the case of the F-35, as we move forward on an annual basis or, more often, when we are discussing the program with the defense acquisition executive, each phase of the program has entrance criteria or exit criteria that play into the maturation of the development of the product. So we have frequent opportunities to pause if we see something coming along that is going to be a major developmental issue for the aircraft.

But in a general sense, that trade-off between affordability and risk, if you will, is cooked into the F-35 program from the start.

Ms. GRANGER. Thank you.

Admiral ARCHITZEL. I think, Congresswoman Granger, your question went to, as we have already mentioned, the idea of stability and anything we are going to acquire is always helpful both for long-lead material, for economic quantity, for industrial base considerations and producibility, and when we perturbate that and when we change those quantities or change those ramp rates, it has an impact that we have to deal with at that point.

So, from an acquisition standpoint, if we know we have a stable amount we are going to buy and we can then translate that to industry and they can count on that investment, they can make investments in their lines, they can make investments in their—that gives them that return on investment that they can assure they are going to have. When we start to perturbate that, that has an impact.

Of course, we also need the same thing back from industry, which is, when you say you are going to produce these, we need to have them come out in the numbers you said and the quality that we need from them, which we are seeing in the case of JSF.

Ms. GRANGER. Thank you. I thank you both.

Mr. MURTHA. Ms. Kilpatrick.

TACTICAL AIRCRAFT INVENTORY

Ms. KILPATRICK. Thank you, Mr. Chairman. I first want to commend you, Mr. Chairman and Mr. Young and the rest of the subcommittee, for your dedication, understanding and intellect of the entire Department of Defense. I am just amazed, having sat here now for a month or so and watched all of you; and I want to put that on the record.

I am most proud of you.

Mr. MURTHA. We are glad to have you on the committee. We appreciate it.

Ms. KILPATRICK. Thank you, sir.

And to the admiral and to the general, the same to you, sir, to both of you. As I sat here and prepared for the hearing last night, it is probably the most technical in terms of picking out technical-

ities and what you need to know in this business, and I want to commend you both, as acquisition men, for your services as you represent them well, your knowledge and all of that.

There has been much talk about the Joint Striker Force as well as the F-35, 8 years, 13 in total. As we move to Afghanistan, and you talked about the Joint Strike fighters and their coordination, the F fighters, will we have enough, will we be able to—because the F-35 is not readily available, will we have what we need as we move into Afghanistan, a different terrain, different type of equipment and fighters necessary?

As the acquisition chiefs in your services, can we meet it? Can we meet the demands? Will our service be safe? Will we have what we need to secure them first, and then to—I don't know what you call "win" because there is no winning in any of this to me.

Can you comment just a bit on that, first in terms of the equipment and capability and the protection of our men and women who have—who will be on the ground and in the air and in the water.

Admiral ARCHITZEL. Congresswoman Kilpatrick, thank you. I appreciate it. We don't often get the acquisition people being told what a good job we are doing, so we appreciate that.

But I will say that as we look forward to your question, which is a good one, we are in a position where we don't know what the next future force levels will be, so we are basing things on the here and now today. But to your comment, as an acquisition force, we have to look across the board both in service and future and what we are buying and procuring will be out there. Concerning the question you have on Afghanistan, per se, we have to deal with what we have today.

To that aspect of it, I will say we take great pains to make sure that we maintain our aircraft in a vigilant way, to make sure that we take care of the people who are flying those airplanes and maintain them, that they are the best equipment we can have so we don't have a fair fight. We are not looking for a fair fight. We are looking for a fight we can win. We keep our warfighters in mind.

I have had command of USS *Theodore Roosevelt* and a squadron of aircraft. General Shackelford has had his experience operationally, as well; and I know what it means to be out there in harm's way. We look to that today.

We mentioned the maintaining of the Strike Fighters today, the E and F, the Hornets, the A through D as well. We have to make sure we maintain those aircraft so that they can go forward with this. It is not just the fighters either, but it is across the board whether it is the aircraft we introduce in the theater today, aircraft like the V-22s, they go in; whatever it happens to be, we have to make sure that we have capable aircraft that are ready and can perform the mission needed at the time they are needed.

Thank you for your question.

Ms. KILPATRICK. Thank you, sir.

General SHACKELFORD. Ma'am, if I may comment, your Air Force today is perfectly capable of responding when the combatant commander calls and asks for force structure to support the joint mission, which we are very capable of doing to the extent that we are called on in Afghanistan, which from an Air Force perspective could largely be thought of from a fighter perspective as ability to

support the joint operation with close air support. We use the F-15E, the A-10 and the F-16 to do that, and we have ample force structure to meet the needs.

From an acquisition perspective, it brings to mind keeping those aircraft relevant for that particular kind of fight. And the types of challenges that we have run into in Afghanistan are primarily related to the elevation, the high terrain, line-of-sight kinds of problems when we have ground forces that are down in valleys and they either have to communicate or have to get air support, which is available and on call.

So, acquisition-wise, what we have done is equipped those types of aircraft with radios that use satellite communication to overcome the terrain issues. They are also secure to deal with possible jamming or intrusion by some bad guy that would want to do that.

We have also deployed a communications gateway, a high-altitude platform that is able to communicate with multiple types of radios. There are various varieties of radios and datalinks that don't all speak the same language, so to speak. Well, this gateway speaks all of them and translates so that we can get that direct communication between the strike aircraft and the folks on the ground, be they the engaged troops or the forward air controllers.

Ms. KILPATRICK. Now, we are far more superior than our adversaries, as Mr. Frelinghuysen was asking. We can beat this even as we beef up our numbers and all that you have mentioned. Are we more superior than an adversary that we will be fighting?

General SHACKELFORD. I would suggest to you that the sophistication we can bring to the fight would be superior to what the adversary can bring. But again we have to think about the type of fight, the irregular warfare that is going on here. We have to make sure we are relevant to that context.

Ms. KILPATRICK. Thank you very much.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Rogers.

F-15 AIRCRAFT

Mr. ROGERS. Thank you, Mr. Chairman.

Gentlemen, welcome. Let me ask you about the F-15. While we are waiting on the F-22s and the 35s and whatever else, you still have to utilize and rely upon the F-15. And when in December 2007 one of them crashed, you grounded all of the F-15 aircraft.

Where do we stand now with the F-15s, and are you sure you have got it right?

General SHACKELFORD. Yes, sir. That mishap, which was early November, resulted in a grounding of the F-15 fleet and a subsequent determination that the F-15Es, the newer airplanes, average about 18 years old, were not at risk because of a different structure; so they were taken out of the equation immediately.

The older F-15, As through Ds, average age of about 27 years at this point, were the culprit, and resulted in a great deal of structural analysis that grounded nine aircraft though five of those, four of those, four or five of them we were able to go and repair that longeron. We retired the other aircraft, but only nine were ultimately at risk of the same type of failure.

Following the analysis that led to an establishment of safety of flight, the fleet was cleared for operation and it has no performance limitations based on that problem with the longeron. There are additional inspections and additional maintenance personnel to make sure that we don't have a recurrence of that particular event.

It also led to a resurgence, if you will, in the aircraft structural integrity program for the F-15, which we have got on contract now for a structural teardown of one of the aircraft and starting on contract later this summer a full-scale fatigue test, which we will carry out over time and will inform us as to what other potential issues we may have for the F-15 in the future, considering we plan to keep 176 what are termed "Golden Eagles" out into the mid-2020s.

Mr. ROGERS. So are the Cs and Ds flying now?

General SHACKELFORD. Yes, sir. The fleet is flying with no restriction based on that longeron problem.

Mr. ROGERS. And the Cs and Ds, those are the nine that you repaired?

General SHACKELFORD. Yes, sir. As, Bs, Cs and Ds.

Mr. ROGERS. And you determined that the Es don't have that problem?

General SHACKELFORD. Yes. The structure on the E, because it is built for a mission that is a two-seat airplane, as opposed to the one seat which, for training versions, had a second seat applied to it—a different structure in the longeron area. So the design flaw that contributed to the mishap doesn't exist in the E model.

Mr. ROGERS. Now, what will happen to the F-15s? What is the prognosis of that aircraft?

General SHACKELFORD. As I mentioned, we have some of them identified as Golden Eagles; those will be the 176 that continue to receive all of the modernization updates over time so that they remain as relevant as possible out into the mid-2020s. The rest will eventually come to a retirement date that will be part of the overall force structure planning for the Air Force.

Mr. ROGERS. Well, when the F-22 comes into play, will the Golden Eagle be replaced, supplanted, by the 22?

General SHACKELFORD. We will have all of our program of record F-22s by the end of 2011, so there will be a significant amount of time while the F-15 is still in the force structure out to the 2020s; so they'll exist in parallel for quite a long time.

Mr. ROGERS. Do you foresee that the E might have some structural fatigue that beset the C?

General SHACKELFORD. At this point, I am unaware of any structural issues with the E model, but that is part of that overall aircraft structural integrity program that will go out and look for those kind of potential problems.

Mr. ROGERS. So you will keep a sharp eye on that?

General SHACKELFORD. Yes, sir.

Mr. ROGERS. I mean, these planes are getting pretty old.

General SHACKELFORD. Yes, sir.

Mr. ROGERS. In fact, the C goes back to what, 1972?

General SHACKELFORD. Early to mid-1970s was the beginning of the F-15A program.

Mr. ROGERS. Thank you, gentlemen, Mr. Chairman.

Mr. MURTHA. Mr. Young.

F-15 GOLDEN EAGLE

Mr. YOUNG. Mr. Rogers' question on the F-15, the Golden Eagle, we are hearing something about, I think it is a contractor proposal on something called the Silent Eagle.

What can you tell us about that, General?

General SHACKELFORD. Sir, I have read those newspaper articles just like you have. That particular proposal from the contractor is intended to provide a limited amount of stealth capability to the international business market—as I understand it, not intended to be a competition for anything existing within the U.S. inventory at this point.

Mr. YOUNG. The Navy's Growler program with the F-18 seems to be doing very well.

Is the Golden Eagle program on target time-wise and cost-wise? Is it where you want it to be?

General SHACKELFORD. To my knowledge, it is healthy. I will go back and get specific details on that and report back to you.

[The information follows:]

The F-15C/D long-term aircraft fleet, also known as the Golden Eagles, consists of 176 aircraft identified to augment the F-22 in the air superiority role of the future. There were originally 179 long-term aircraft, selected in the 1995-1998 time-frame based on condition and load factors, but three have been lost to aircraft mishaps. The Air Force currently expects to be flying these long-term aircraft until at least 2025.

In order to keep the long-term fleet operationally relevant, the Air Force continually evaluates the operational environment in which the aircraft must operate and the current and future capabilities these aircraft must have. The 176 F-15C/D long term aircraft receive capability and sustainment upgrades to keep them operationally relevant. Other F-15C/Ds, including 54 test and training aircraft, receive only safety of flight modifications. If the Air Force determines that a specific long-term fleet upgrade is also required for test and training aircraft, then these aircraft are modified as well.

Over the last 10 years, the long-term F-15C/Ds' upgrades have included engine modifications; GPS capability; two radar upgrades; Link-16 data link; a helmet-mounted cueing system; an Identify Friend or Foe (IFF) upgrade; and a radio upgrade. These programs have all been successfully completed, except the APG-63(V)3 Active Electronically Scanned Array radar upgrade, which is still in progress.

Additional long-term aircraft upgrades that have strong Air Force support and may be addressed in future budgets include a cockpit control panel upgrade; a digital video recorder system; an IFF Mode 5 upgrade; a Link-16 data link cryptographic upgrade; a secondary power system upgrade; an infrared spectrum search and track capability; and an aircraft mission computer upgrade.

Mr. YOUNG. Thank you.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Frelinghuysen.

LOW OBSERVABLE AIRCRAFT

Mr. FRELINGHUYSEN. You seem to be focused on the stealth issues here. Can you comment a little about the F-22 low observable problems?

I know a lot of materials are applied to aircraft. Can you talk about—there were some problems and have they been addressed?

General SHACKELFORD. Yes, sir. As low observable maintenance plays into the overall mission-capable rate for the F-22, yes, there have been some issues, and we are learning a lot about the F-22 through those.

I might comment that——

Mr. FRELINGHUYSEN. Is it manning and materials?

General SHACKELFORD. Yes, sir it is both. The situation in the field is in—particularly at Langley Air Force Base where the MC rate dipped quite severely, the result of a combination of events that had to do with an upcoming inspection, moving experienced maintenance personnel out to the new sites at Elmendorf and Holloman, a general new experience level within the maintenance community. However, those decisions, that were made to favor training pilots because of the number that they had there, in lieu of keeping up with the low observable (LO) maintenance, did not yield aircraft that were not combat capable. Certainly, if we had been called on to deploy at that point, we would have taken the time to fine tune every aircraft that was going to deploy.

The details of that situation and specific numbers are over in the operational realm. If you would like details on that, I can get those for you on the record.

[The information follows:]

F-22 mission capable (MC) rates at Langley Air Force Base, Virginia have been affected primarily due to maintaining the F-22 low observable (LO) system. These F-22 MC rates are depicted below:

LANGLEY AIR FORCE BASE F-22 MC RATES (FY05–FY09)

	FY05	FY06	FY07	FY08	FY09 (1 Oct–31 Mar)
39		55	61	55	41

LANGLEY AIR FORCE BASE F-22 MC RATES FY09 (Oct 08–Mar 09)

	Oct 08	Nov 08	Dec 08	Jan 09	Feb 09	Mar 09
18		27	30	57	60	57

F-22 LO maintenance has been the leading Not Mission Capable (NMC) driver because of LO material reliability, component reliability, manning and management. LO system material durability issues are documented and both the F-22 System Program Office (SPO) and the manufacturer are actively working technical solutions. Some components beneath LO intrusive panels are less reliable than predicted, but the SPO has an aggressive Reliability and Maintainability Maturation Program (RAMMP) that is successfully improving reliability of these components. To provide immediate manning assistance Lockheed Martin sent their own maintenance personnel to assist Langley in their LO maintenance recovery. AF also completed a Logistics Composite Model manning study that will “right-size” LO maintenance manning. To improve F-22 LO maintenance management, the Air Force performed a LO process improvement team comprised of field units, major commands, SPO and Lockheed Martin to obtain and implement “best practices” across all F-22 operating locations. Additionally, the Air Force stood up a LO maintenance career field in Feb 09 to better train and grow LO maintenance experts.

LO maintenance lessons have been learned and Langley Air Force Base's F-22 MC rate is improving.

General SHACKELFORD. Now, from an acquisition perspective—

Mr. FRELINGHUYSEN. Well, it is such a superior plane, I want to make sure that it is the top of the line.

General SHACKELFORD. Yes, sir. And it absolutely is.

Now, we can make choices when it comes to how much time we are going to set an airplane down to fine tune the signature of it, and that is how I would describe a lot of this decision process. From an acquisition perspective, what we have is an aircraft that is 53,000, maybe 58,000 hours into its lifetime, so it is still what we would consider to be immature.

So we are learning lots of new things about particularly LO maintenance and the materials which we fold back into changes in those materials to move towards a 100,000-hour maturity point that has been designated to occur probably late next year where we have a meantime between a maintenance key performance parameter to meet and we project to meet that with these changes. But in a similar notion, taking that learning and applying it to the F-35, which will also be a flightline-maintained LO platform, will help us overcome some of these issues and—

Mr. FRELINGHUYSEN. But there has been some criticism from a lack of stealth with the Joint Strike Fighters. There are certain vulnerabilities in that regard; isn't that accurate?

General SHACKELFORD. The signature of the F-35 is similar to the F-22.

Mr. FRELINGHUYSEN. The signature is that similar?

General SHACKELFORD. It is very similar.

Mr. FRELINGHUYSEN. I thought the F-22 was pretty invisible. I thought there were certain vulnerabilities—

Mr. MURTHA. I don't think we want to get into—

Mr. FRELINGHUYSEN. Okay. Well, thank you very much.

Mr. MURTHA. Mr. Visclosky.

AIRCRAFT PROGRAM COST ESTIMATES

Mr. VISCLOSKY. Chairman, thank you very much.

Admiral and General, by statute, major acquisition programs are required to have an independent cost estimate conducted as part of the acquisition process, but there is no statute that directs the Department to actually fund that independent estimate.

Several programs are not funded to the estimate but to a lower confidence level. One of those programs, and there are others, is the Joint Strike Fighter program. What factors are considered in funding a program to a lower confidence level than that provided by an independent cost estimate?

Admiral ARCHITZEL. The factors that go into cost estimating in terms of the producibility, the ability to meet—the ability—the producibility, the affordability, the things that go into materials that go into the bids that would come forward, what is the confidence in those bids, et cetera? What is our confidence in the vendor's ability to produce? When you talk confidence factors in terms of cost estimating, you get into probability curves which go to about

where you would want to fund the airplane in terms of probability of meeting or not meeting a certain cost estimate.

Many, many factors that go into that run the full range from the producibility aspect on the producing side to the material side to the actual labor rates and how much we know or don't know on those issues as we go forward. So it is a variable input that comes back to say what that would be.

Mr. VISCLOSKY. Is the independent cost estimate usually followed or only followed in the breach—in estimating what a program is going to cost?

Admiral ARCHITZEL. I don't mean to be evasive. I would say it depends on the program and where it is versus what the services or the program's estimate would be as well as the independent estimate and then doing the determination of where you are. Generally, I would tell you that we end up following the independent estimates where they will come in and say, we will have an understanding of what the differences are between an estimate from the program or from the Navy or the service versus, say, a Cost Analysis Improvement Group (CAIG) estimate that comes in; and where we can understand those differences and we can accept risk, we might determine not to go to the full CAIG estimate, but we would understand what those differences are before we agreed.

If we can't and we believe it is, we would fund the estimate that is there.

Mr. VISCLOSKY. Is the budget consideration a factor here, where if you go to a lower confidence level as far as what the cost is going to be, you can put more program into a given budget request and worry about paying for it later?

General SHACKELFORD. Yes, sir.

If I could comment from that perspective, the independent cost estimate that we typically use comes from the OSD Cost Analysis and Improvement Group For Acquisition Category (ACAT) 1 or the larger dollar programs, and their practice is to recommend roughly a 50 percent confidence level in those numbers.

Now, we will typically take that and if we have the ability within our budget, particularly at the program start point, which is milestone B, when we go on contract for the development, which is now called engineering and manufacturing development, our goal would be to fund that at the 80 percent confidence level. And that is a new initiative, if you will, within the Air Force, one of the five things we are looking for under recapturing acquisition excellence. So getting to that point is definitely an issue of, are we oversubscribed in the overall budget in terms of a lot of content and insufficient dollars to fund to the confidence level we would like to.

So there is a discipline piece on our part to pick and choose what we actually start and make sure it is funded at a high confidence level at program initiation there at milestone B.

Mr. VISCLOSKY. I am confused as to what the high confidence level is and the 50 percent and the 80 percent. Is that the level in the independent estimate, or is that something different?

General SHACKELFORD. The independent estimate will produce a cost curve where there is a probability of that being the cost, based on their ability to forecast in their estimating technique. Fifty percent, which is what is typically an OSD Cost and Analysis Im-

provement Group (CAIG) number, officially means there is a 50 percent probability of coming in under that cost, which also means, of course, a 50 percent probability of being over the cost.

If you follow up that curve farther, there is a point where—

Mr. VISCLOSKY. Of the independent cost estimate?

General SHACKELFORD. Of the independent cost estimate.

If you follow that curve up farther, you will get to a point where the probability of the actual cost being below that figure is 80 percent, and that would be the desirable point for starting the program.

Admiral ARCHITZEL. If I could, Congressman, when we talk about these numbers of 50 percent probability, above and below, on balance if we looked at all Navy programs, we would find that most average out to be at the 50 percent level.

When we talk about that and when we talk about whether you are above or below in terms of where your cost estimate comes in, what is really important is the shape of that curve—so what does it mean to be—50 percent is one thing, but what does it mean to be 10 percent below that in a program? If it is dramatically different, that is significant.

It is not just the point where you fund the 50 percent point or the 80 percent point of a curve, but what is the fidelity that goes to generate that curve and that confidence that is there.

As you go further into a program, it gets more defined and, if you will, the shape of that curve gets steeper because the difference between a 50 percent and an 80 percent or a 10 percent would dramatically change as you know more about the program, as you go through its development and you start to learn more and more.

So at the beginning of a program, when you don't know as much as you would like to have, it is there.

Mr. VISCLOSKY. Let us take presidential helicopter. You have an independent cost estimate. Does that say, per copy, here is what it is going to cost?

Is that what the independent cost estimate says?

Admiral ARCHITZEL. The independent cost estimate will give the cost of the program, and in that you could come out and get the average unit cost of the airplane.

Mr. VISCLOSKY. You have life-cycle costs, too, for the program?

Admiral ARCHITZEL. Right. As well as the nonrecurring and recurring costs going into what you have.

It is all factored in as you go forward in what is provided in the estimates.

Mr. VISCLOSKY. So what is the 50 percent? If they give you a life-cycle cost, here's what we think it is going to cost, what would be the 50 percent?

Admiral ARCHITZEL. The 50 percent would be what would be the average per—average unit flyaway cost, for example. That would be, what is it going to be and what is your confidence of attaining that so—on that particular issue.

Mr. VISCLOSKY. Let me ask it a different way, because I don't want to take the committee's time, because I am not following you at all.

Mr. MURTHA. Let me interrupt the gentleman because I have said this over and over.

Now, you two are responsible for all the acquisition, not only tactical air but all the air. What we get from the services, we get an RFP which goes to the industry. The industry underbids it. You exaggerate the number of airplanes you are going to buy, or whatever it is you are going to buy, because you know that then reduces the cost. So whatever the independent cost estimate is, it doesn't mean anything because in the end we, representing the taxpayer, have to pick up the tab for your mistakes. When I say "your mistakes," I am talking about this combination.

Now, the helicopter, in particular we have the problem of the White House saying in order to protect the President, we have to add all these provisions. And I had 14 of them in here the other day trying to explain to them, Folks, we are not going to build this expensive helicopter. We are going to build the first version, but not the second version. And we have people on this committee, all of us want to protect the President, but when they keep adding criteria to this, it really makes it very difficult for us to come up with it.

Every program is overrun because of that. The ship program, same thing: LCS said \$188 million. We knew it was going to be a lot more than that.

So it is a combination of things. The problem is, we have to pick up the tab.

You mentioned stability in the program. We want stability in the program, but unless industry and the services cooperate and give us an honest estimate, then we have a real problem down the road and so we have to make up the difference.

For instance, what happened with the E-2. We had to take one out to find \$150 million because of all these other things that happened in the budget. So my advice is—and I know how difficult it is to have industry not come in with an underestimation and you not to estimate you are going to build "X" number, because you know you are not going to build "X" number, so that we have a reasonable estimate of what is going to happen; and then we can do a better job making sure that you get the money and stabilize the program.

I don't know if that answers the gentleman's question, but—

Mr. VISCLOSKEY. I am in agreement with you.

The other examples are the DDG-1000 program, the advanced extremely high frequency satellite program, the CVN-21 aircraft carrier, the helicopter program. And the concern I have from a budget standpoint is, then every year you get the ripples where, okay, now we have got to adjust each one of these programs; and as the chairman says, now we have got to find new money.

Recognizing many of these are unique systems and you are always going to have problems, but you have got a statute, you are talking about an independent estimate, and then—

Mr. MURTHA. Let me—

Mr. VISCLOSKEY. Why are we going through the drill?

I am fine, Mr. Chairman.

Mr. MURTHA. Let me mention on a lighter note, I see big changes in the services. I had two nephews graduate from the Naval Academy. Big changes in the Navy.

But the Air Force has the biggest changes. You mentioned my grandson was at the Air Force Academy before we met. I went out there to the Air Force Academy and they showed me the mud that these guys crawl through. They showed me the tents that they stay in. They showed me the combat obstacle courses they went through. And I was amazed.

I don't know why they showed me that—to make sure that I knew how tough it was at the academy.

And then I happened to get a call from the Secretary of Defense while I was out there about another matter. And I told him, I said, "They are going through the mud, these poor guys in the Air Force; they don't ever spend any time in the mud." He said, "It wasn't like that when I was in the Air Force."

And I see today evidence of that. I mean, your professorial response, which is good. You are the premier fighter pilot in the Air Force. I would never have believed that if I hadn't read your biography. You are the best the Air Force has; and you come up here, and yet you know all these technical details. That is a pleasure.

And, of course, the same way, you guys have got real responsibility. And I know you can't control what goes over in RFP, but we need more honest RFPs and the industry to be more honest, so that we can judge this budget and stabilize the damn thing, so we can buy in quantities that we would like to buy, so we don't have these estimates which completely distort what we are trying to do.

So I appreciate your testimony and we appreciate your service to the country, and the Committee will adjourn until 10:00 a.m. tomorrow. Thank you very much.

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

LOW OBSERVABLE MAINTENANCE FACILITIES

Question. Low observable maintenance is the leading F-22 non-mission capable driver fleet-wide. Are more low observable maintenance facilities necessary to mitigate this problem?

Answer. Yes, more F-22 low observable maintenance facilities will help mitigate the problem.

F-15 EAGLES

Question. How many planes are associated with a typical F-15 squadron?

Answer. Both the typical F-15C/D and F-15E squadrons each have 24 primary aircraft authorized (PAA). In addition, each squadron typically has a two backup aircraft inventory (BAI) plus 1-2 attrition reserve (AR) aircraft. The BAI and AR numbers are not fixed and, can change over time.

Question. How many personnel, contractors, and officers are associated with a typical F-15 squadron?

Answer. Operational F-15 fighter squadrons are programmed for a crew-to-aircraft ratio of 1:25. This crew ratio captures the line pilot requirement for line units. For a squadron with 18 aircraft assigned, the line pilot requirement is 23. For 24 aircraft the number is 30. Additionally, each squadron is staffed with support functions essential to conduct flying operations, such as standardization and evaluation, aviation resource management and administrative support. Finally, leadership of the unit and the management of its personnel comprise the remainder of the organization. For a unit with 18 aircraft assigned, the typical unit has 48 personnel (29 officers and 19 enlisted). For a unit with 24 aircraft, the number is 56 personnel (36 officers and 20 enlisted). Contractors are not associated with a typical F-15 squadron.

GOLDEN EAGLES

Question. Does the Air Force intend to upgrade all the F-15C/Ds to be “Golden Eagles” or just some portion?

Answer. There currently are 176 long-term F-15C/D aircraft, also known as Golden Eagles. The Air Force does not intend to upgrade additional F-15C/Ds to long-term status. The existing long-term aircraft will continue to receive upgrades as necessary.

F-15 DRAWDOWNS

Question. Does the Air Force intend to drawdown F-15s earlier than previously programmed? If so, is there a comparative “Smart-Operations” study of alternatives on the future of the F-15 Force?

Answer. The Air Force does intend to retire some F-15s earlier than previously programmed. The Air Force took a comprehensive look at the fighter force structure and determined it was in the best interest of national defense to adjust the number of aircraft world-wide to successfully carry out a modernization and recapitalization of the fighter fleet to meet the needs of the combatant commanders. The plan accelerates the inevitable retirements of older legacy aircraft and reinvests savings into the remaining legacy fighters and bombers, munitions, other key enablers. Although the fighter fleet is smaller, the effects provided by the newer modifications, preferred munitions, and critical enablers create a capabilities based bridge from our Fiscal Year 2009 legacy dominated force to the fifth generation-enabled fighter.

[CLERK’S NOTE.—End of questions submitted by Mr. Boyd.]

TUESDAY, MARCH 31, 2009.

ARMY AVIATION PROGRAMS

WITNESSES

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, UNITED STATES ARMY

BRIGADIER GENERAL WILLIAM T. CROSBY, PROGRAM EXECUTIVE OFFICER, AVIATION, UNITED STATES ARMY

BRIGADIER GENERAL WALTER L. DAVIS, DIRECTOR FOR ARMY AVIATION, OFFICE OF THE DEPUTY CHIEF OF STAFF, G-3/5/7, UNITED STATES ARMY

INTRODUCTION

Mr. BOYD. The Committee will be in order. In the tradition of Chairman Murtha's policy, I will start on time. And we are very excited this morning to be holding this hearing on Army Aviation.

We are very pleased to welcome General N. Ross Thompson, III, Principal Military Deputy to the Acting Assistant Secretary of the Army for Acquisition, Logistics, and Technology; also Brigadier General William T. Crosby, Program Executive Officer, Aviation; and Brigadier General Walter L. Davis, Director of Army Aviation, Office of the Deputy Chief of Staff.

General Thompson has appeared before this committee many, many times. Welcome back, General Thompson. Generals Crosby and Davis, welcome to the hearing to you, gentlemen. You are very well qualified to address issues related to Army Aviation, and those of us who know a little bit about your careers thank you for being here, and thank you for your many years of service to this great Nation that we live in.

I anticipate that we will have a far-ranging discussion this morning. The Army's premier aviation acquisition program, the Armed Reconnaissance Helicopter, has been terminated following a Nunn-McCurdy review. The Army has lost more than 40 current Scout helicopters. The OH-58D Kiowa Warrior and replacement aircraft are sorely needed. No doubt your discussions will address these programs for AH-64 Apache, UH-60 Blackhawk, the CH-47 Chinook, and the newest Army helicopter in production, the UH-72A Lakota. We will also have questions about various unmanned aerial systems, including the Predator, Shadow, Raven, and the Micro Air Vehicle.

Finally, we will have some questions on the Joint Cargo Aircraft, the Army's new medium-sized multipurpose cargo aircraft, which will replace multiple Army platforms. The committee is looking forward to your statement, and we anticipate an interesting and informative question-and-answer session.

Before we have your opening statement, General Thompson, I would like to recognize, since Mr. Young is not here, I would like to call on Mr. Frelinghuysen for any remarks that he may have.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman. Gentlemen, welcome, and thank you for your service. Aviation assets are important, and let me thank you for providing them. You cannot fight wars without aviation. And we are appreciative of, I think, the tremendous job that the Army and our other services have done in that regard. And we look forward to your testimony here this morning. Thank you again for your service.

Mr. BOYD. Thank you, Rodney.

And General Thompson, the floor is yours.

SUMMARY STATEMENT OF GENERAL THOMPSON

General THOMPSON. Well, thank you Congressman Boyd, Congressman Frelinghuysen, and distinguished members of the Committee on Defense. I want to really thank you for the opportunity to appear again before the Committee today.

And today we are going to discuss Army Aviation programs.

Mr. BOYD. General Thompson, is your mike on?

General THOMPSON. It is, sir.

Mr. BOYD. The green light is—

General THOMPSON. The green light is on.

Mr. BOYD. Okay. Thank you.

Mr. BISHOP. Turn it to your mouth.

General THOMPSON. I will talk more directly into the mike.

Mr. FRELINGHUYSEN. He has had all that experience before the Committee. I think he will get it.

General THOMPSON. I do not think I could mumble my way through this and get away with it. So again, we are here this morning to talk about Army Aviation programs and our mutual efforts to develop and field new and improved equipment and systems to support our warfighters, while ensuring proper fiscal stewardship of the taxpayer dollars.

With me today, as you highlighted, is Brigadier General Tim Crosby, who is the Program Executive Officer for Aviation, who does all the acquisition on our aviation systems; and Brigadier General Walt Davis, who is the Director for Army Aviation in the Office of the Deputy Chief of Staff, G3 for the Army.

We have a joint written statement that I respectfully request be made a part of the record for today's hearing.

DEMAND FOR ARMY AVIATION

Mr. Chairman, with the support of this subcommittee and other Members of Congress and the American people, Army Aviation is meeting the demands of our overseas contingency operations and keeping our aviation assets at a high state of readiness. The demand for our aviation forces and platforms continues to increase, and we expect it to peak within the next 60 days, as the Sixth Aviation Brigade deploys to Afghanistan. Thus far, we have flown more than 3 million flight hours since 2003 in support of operations in Iraq and Afghanistan. Depending on the aircraft type, this is three to five times higher than normal mission requirements, but

still our aviation fleet is performing extremely well in theater, under very challenging and dangerous conditions. It has been 5 years since the Army, with the support of the Congress and the Office of the Secretary of Defense, terminated the Comanche Helicopter Program and took the resources to allow modernization of the entire Army Aviation fleet. Our progress in this regard has been steady and significant. And we thank you for your guidance and your strong support in those 5 years.

Today, 9 of the 13 systems identified for funding at Comanche termination are in production. And by fiscal year 2011, we will have started fielding 3 more of the 13 systems. These programs receive priority so we can field the systems to units that are preparing to deploy to overseas operations or to those that are already currently deployed in support of operations.

Because of the timely modernization of the Army Aviation fleet, our warfighters in theater already have the advanced protection and support of the CH-47F Chinook and the UH-60 Mike Blackhawk helicopters, which are the latest variants of those two helicopters, along with Sky Warrior and Raven Unmanned Aircraft Systems, and a pre-production variant of the Micro Air Vehicle from our Future Combat Systems program to provide enhanced force protection.

The Apache helicopter continues its role as the world's most lethal and survivable helicopter. Most of these aircraft will enter Block III remanufacture with less than 50 percent of the airframe's design life, which is 10,000 hours, remaining.

Mr. BOYD. General Thompson, we will see if we can get this stopped. I think I have got—it is very difficult to hear over that. So why don't we just halt for a second? Is that something in another room? We really want to hear what you have to say, General Thompson.

General THOMPSON. I assure you I did not pay that guy 20 bucks to start drilling.

Mr. BOYD. I hear you.

Mr. FRELINGHUYSEN. Good timing.

APACHE BLOCK III

Mr. BOYD. Isn't Sherry wonderful? She got it stopped already. Thank you. Go ahead.

General THOMPSON. Okay. Sir, we were talking about the Apache Block III. The Block III remanufacture is an ideal opportunity for us to insert new airframes into the Apache fleet at a minimal additional cost. The Army is on track with its commitment to modernize also the remaining AH-64 Alphas, the older variants of the Apaches in the National Guard.

LIGHT UTILITY HELICOPTER

The Light Utility Helicopter has enabled us to return Blackhawks to the warfighting fleet, and allowed the retirement of almost all of the UH-1 Hueys, the Vietnam-era Huey helicopters, and the OH-58, Alpha, Kiowa, and Charlie models in both the Active and Reserve components. For the National Guard, this means more Blackhawks for homeland security and for disaster relief missions.

ARMED RECONNAISSANCE HELICOPTER

The Army and the Department of Defense remain committed to the requirement for a manned armed helicopter capability and the need to deliver this capability to our soldiers in a responsible and timely manner.

We are currently evaluating what additional enhancements and service life extension work will be required to continue to safely sustain the Kiowa Warrior fleet until a replacement Armed Reconnaissance Helicopter is procured.

In other areas of aviation, the first two Joint Cargo Aircraft have been delivered to the Army for testing, and 11 are on contract. The Aerial Common Sensor program is awaiting the Defense Acquisition Executive's approval to release the technology development request for proposal so we can get the responses back from industry. Our Army Unmanned Aircraft Systems continue to provide enhanced capabilities to our warfighters in both Iraq and Afghanistan.

Mr. Chairman, the demands placed on our aviation crews are great, but these demands are continually met around the world and around the clock. Aviation has an essential and growing role in the success of our military operations worldwide, including homeland security. Our progress in Army Aviation is steady and significant.

I want to thank you and the members of the Defense Subcommittee for your sound advice and your strong support. This concludes my opening remarks. And Brigadier General Davis and General Crosby and I look forward to your questions.

The reason that they are here today is to make sure that I get all the answers right, or we get all the answers right. I am also training the bench, because someday they will be here and I will not. And do not let General Crosby's South Carolina accent fool you. He knows quite a bit about Army Aviation.

[The joint statement of General Thompson, General Crosby and General Davis 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

BRIGADIER GENERAL WILLIAM T. CROSBY
PROGRAM EXECUTIVE OFFICER, AVIATION

AND

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INTRODUCTION

Chairman Murtha, Congressman Young, and distinguished Members of the Subcommittee on Defense, thank you for this opportunity to discuss Army Aviation programs. We are pleased to represent Army leadership, the civilian 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 aviation systems for mission success. We thank Members of this Committee for your shared commitment to this goal. We are grateful for your advice and guidance, along with your steadfast support.

It has been five years since the Army with the support of Members of Congress and the Office of the Secretary of Defense (OSD) terminated the Comanche helicopter program to allow modernization of the entire Army Aviation fleet. In just those few years, we have seen steady and substantial progress. Today, nine of the 13 systems identified for funding at Comanche termination are in production. By Fiscal Year 2011 (FY2011), we will have started fielding all the aircraft programs, except the Armed Reconnaissance Helicopter. That means 69 percent of all these programs are in some form of production today – low, initial, or full rate production, with 54 percent in full rate production.

These programs will contribute directly to overseas contingency operations by priority fielding to units preparing to deploy to combat operations or currently deployed in support of combat operations. We want to emphasize that every one of these programs will be fielded to units next in rotation to the warfight or units now supporting the warfight. Currently operating in combat operations are the CH-47F and UH-60M

helicopters, the Sky Warrior Alpha, Sky Warrior Block '0', and Raven Unmanned Aircraft Systems and a pre-production variant of the Micro Air Vehicle spun out of the Future Combat System. The Light Utility Helicopter has enabled the return of UH-60s to the warfighting fleet and has allowed retirement of UH-1 and OH-58s in both the Active and Reserve Components.

The Army Aviation fleet is performing extremely well in Iraq and Afghanistan under exceptionally challenging and dangerous conditions. More than 3 million flight hours have been flown since hostilities began in Iraq in March 2003. Our monthly operational tempo (OPTEMPO), depending on the aircraft type, is three to five times higher than normal peacetime mission requirements. Despite these demands, our mission capable rates met or exceeded the 75 percent standard established for Army aircraft.

These numbers have been achieved as the demand for aviation forces and platforms has continued to increase. While numbers of troops deployed ebbs and flows, the demand for aviation forces continues to grow and will be at its peak within the next 60 days as a sixth aviation brigade will deploy to theater. Army Aviation has an essential role in overseas contingency operations, and will continue to perform that role until the last Soldier comes home.

With the support of Members of Congress and the American people, we are meeting the requirements of a high OPTEMPO and keeping our aviation assets at a high state of readiness which includes the following:

- Extensive Mission Equipment Packages installed on deploying aircraft to provide enhanced aircraft/aircrew survivability in combat operations,

improve communications and situational awareness, improve aircraft performance, and help negate the detrimental effects on aircraft and components from operations in the harsh desert environment;

- Additional aircraft modifications such as mounted Forward Looking Infrared (FLIR) for Medical Evacuation and Satellite Communications to meet the operational needs of our combatant commanders;
- Installation of Digital Source Collectors to monitor and provide real-time information on the health and condition of aircraft systems to support the Conditioned Based Maintenance concept;
- Higher repair parts stockage levels, visibility over requirements, and express shipments that preclude deployed aircraft being down for parts for any length of time;
- Substantial maintenance and supply support in theater, to provide around the clock scheduled/unscheduled maintenance support to deployed units;
- Aviation reset's extensive Special Technical Inspection and Repair program, which provides fully mission capable aircraft back to deployed units in the shortest time possible; and
- Procurement of replacement aircraft against operational losses of which you have fully funded all our requests submitted to date, and we thank you.

The Army is currently managing a number of major aircraft programs that provide the current capability to the commanders in the field, and will provide enhanced capability in the future.

ARMY AVIATION PROGRAMS

The **UH-60 Black Hawk** is the work horse of Army Aviation. The current UH-60 fleet is comprised of 1,748 aircraft, including 951 UH-60As (produced between 1978 and 1989), 689 UH-60Ls (produced since 1989) and 108 new UH-60Ms.

The Black Hawk helicopter is in its 32nd year of production. To date, the Army has employed seven multi-year, multiservice production contracts. The current contract extends from FY2007 to FY2011 and includes Navy H-60 aircraft, as well as Foreign Military Sales aircraft.

The ongoing UH-60A to UH-60L recapitalization program extends the service life of the Black Hawk program while providing the improved capability and safety margin of the UH-60L. The Army plans to induct 38 aircraft in FY2009 and 228 aircraft between FY2010 and FY2015.

The UH-60M program incorporates a digitized cockpit for improved combat situational awareness, lift, range, and handling characteristics for enhanced maneuverability and safety. These improvements also extend the service life of the aircraft.

The Army plans to improve the safety of the UH-60M platform with a Preplanned Product Improvement upgrade through the installation of digital source collectors, and improved handling capabilities provided by Fly-By-Wire technology, plus increased

rotorcraft interoperability through the integration of a Common Aviation Architecture System shared with the CH-47F Chinook and Special Operations helicopter fleets. Additionally, the Army intends to pursue a Common Engine Program shared with the AH-64 Apache fleet.

The **Light Utility Helicopter (LUH)** program is successfully executing the Army transformation strategy and meeting all cost, schedule, and performance targets as specified in the acquisition strategy. The aircraft has been fielded to the National Training Center at Fort Irwin, California; the Joint Readiness Training Center at Fort Polk, Louisiana; and the U.S. Army Transportation Corps at Fort Eustis, Virginia. Additionally, the LUH has been fielded to Army National Guard (ARNG) units.

The Army is procuring 345 aircraft with a firm fixed price contract. To date, the Army has purchased 128 UH-72 Lakota aircraft -- 58 aircraft have been delivered and more than 54 fielded. The UH-72A has demonstrated exceptional readiness rates that exceed 90 percent. The Lakota is currently conducting Medical Evacuation, VIP, and general support missions. It has also been fielded to ARNG units to conduct disaster relief, counter drug operations, and institutional training missions.

Production of the LUH is transitioning from Germany to Columbus, Mississippi. Forty aircraft were produced in Germany and the remaining 305 will be produced in the United States as part of a three phase production duplication plan. The complete domestic production line operation is on schedule to begin in April 2009 and will have fully transferred to Columbus by the end of 2009. Increasing domestic content is also part of the production duplication plan and is expected to exceed the 65 percent goal.

The ARNG is pursuing funding to procure, apply, and sustain a Mission Equipment Package – searchlight, FLIR, situational awareness/command and control moving map displays, hoists and Medical Evacuation kits to support the Security and Support battalions in their support of the homeland security/homeland defense/counter-drug mission.

The **CH-47 Chinook** is a proven heavy-lift helicopter, supporting our Soldiers every day in Iraq and Afghanistan and conducting missions that no other helicopter on the battlefield can accomplish. It is the Army's only helicopter capable of intra-theater cargo movement of payloads up to 16,000 pounds.

The Army is fully committed to the procurement of 513 Army CH-47F and U.S. Special Operations Command MH-47G aircraft. To date, the Army has taken delivery of 61 CH-47F and 49 MH-47G aircraft, has an additional 222 CH-47F and six MH-47G aircraft on contract, and has fielded four operational CH-47F Chinook units – two of which have deployed to the theater of operations.

The U.S. Army signed a five year firm-fixed price contract for 181 CH-47F Chinook aircraft that will achieve a minimum savings of \$450 million or 11 percent. The multi-year contract provided for 34 option aircraft, 10 of which were executed with the basic contract. The CH-47F Chinook program is on-cost, on-schedule, and has met or exceeded all performance requirements.

The **AH-64D Apache** is the world's most lethal and survivable helicopter. It is the most feared weapon system in the current theater of operations. Continued modernization, including the ongoing fielding of the Modernized Target Acquisition

Designation Sight/Pilot Night Vision Sensor (M-TADS/PNVS), is critical to maintaining that position.

The Block III Apache is essential to the Army's current and future forces. It is the Army's only manned aviation platform able to meet the network centric requirements of the future force as well as Joint Force requirements. It is also the first aircraft designed for and fully capable of complete control of Unmanned Aerial Vehicles (UAVs). This characteristic fully enables the synergistic manned-unmanned teaming between attack aircraft and UAVs that is showing such promise on the battlefield. The Apache Block III System Development and Demonstration remains on schedule and within budget. All Acquisition Program Baseline milestones have been met or exceeded to date. A Longbow Apache, with Block III technologies installed, performed well in the recent Future Combat Systems Experiment 2.1/Joint Expeditionary Force Experiment Spiral 3.0 and was the only Army aviation platform participating.

High OPTEMPO in Iraq and Afghanistan, coupled with repeated deployments of Longbow units, have consumed an inordinate percentage of the Apache airframes' useful life. The majority of aircraft will enter Block III remanufacture with less than 50 percent of the airframe's design life (10,000 hours) remaining. Block III remanufacture is an ideal opportunity to insert new airframes into the Apache fleet at minimal additional cost, providing 100 percent of the design life back to the fielded unit.

The Army is on track with its commitment to modernize the remaining AH64A battalions in the National Guard. The Army will remanufacture two of these battalions in FY10 and 11 leaving only two AH64A battalions in the Army. The modernization plan

for the last two battalions of AH64A will be dependent on the outcome of the 'Analysis of Alternatives' for the Armed Scout Helicopter.

The Army and the Department of Defense remain committed to the requirement for a manned **Armed Scout Helicopter** (ASH) capability and the need to deliver this capability to our Soldiers in a responsible and timely manner.

As a capability bridging strategy, the Secretary of the Army approved a strategy to maintain the Armed Reconnaissance Helicopter (ARH) funds within Army aviation and redistribute them into three primary efforts: (1) sustaining and improving the OH-58D Kiowa Warrior; (2) modernizing the ARNG AH-64A fleet; and (3) conducting a competition for and procuring the capabilities associated with the future ASH. The Vice Chief of Staff of the Army and the Army Acquisition Executive jointly signed a Memorandum for the Record codifying this strategy.

To support the potential procurement effort, the Army is conducting a bottom up review of the armed reconnaissance capability requirement to include a thorough assessment of the specific requirements identified for the initial ARH program, as well as initiating a formal 'Analysis of Alternatives'. The analysis will cover the entire spectrum of options – from the potential use of UAVs to the use of a manned/unmanned aircraft mix to the procurement of a new manned platform.

Due to the time required to complete these assessments, the Army is currently evaluating what additional enhancements and life extension work, if any, will be required to continue to safely sustain the Kiowa Warrior fleet until a replacement is procured.

The U.S. Army Audit Agency completed an official After Action Review to identify lessons learned from the termination of the ARH program. The results are being evaluated for assimilation into Army acquisition programs and for use in developing an acquisition strategy to meet the manned ARH requirement.

The **Joint Cargo Aircraft (JCA)**, or C-27 aircraft, corrects operational shortfalls and provides commonality with other aviation platforms to provide direct support to the Army in meeting on-demand tactical transport of time sensitive/mission critical (TS/MC) cargo and passengers to forward deployed units.

The JCA meets a validated Joint Requirements Oversight Counsel approved requirement. The Army 'Analysis of Alternatives', validated by OSD, supports 75 JCA to meet Army's TS/MC requirement. The JCA supports Army/Air Force National Guard with increased capability for domestic mission responsibilities.

The first two C-27 aircraft have been delivered to the Army for testing and the next 11 aircraft are already on contract. The program is meeting all cost, schedule, and performance targets. The first JCA unit will deploy to Operation Enduring Freedom (OEF) in FY2010.

The **Joint Heavy Lift (JHL)** was intended to be a Vertical Take Off and Landing heavy-lift aircraft supporting mounted vertical maneuver. The JHL requirement has been incorporated into the U.S. Air Force lead **Joint Future Theater Lift (JFTL)** effort. The JFTL requirements document is under development. The envisioned aircraft will provide a heavy lift (20+ ton) payload capability at 200+ miles, aerial sustainment to the point of need, the ability to operate over tactical and operational distances to/from land or sea bases, and the ability to self-deploy.

The **Aerial Common Sensor (ACS)** program is the Army's future multi-intelligence, manned, fixed-wing, Reconnaissance, Surveillance and Target Acquisition/ISR system that carry multiple highly accurate intelligence sensors, processing tools, air/ground/satellite communications, and onboard operators/analysts. This unique combination of attributes provides the ground tactical commander an assured near-real-time operational view of unprecedented clarity enabling tactical ground forces to operate at their highest potential. ACS is awaiting Defense Acquisition Executive approval to release the Technology Development (TD) Request for Proposal. A successful source selection will result in the award of two competing TD contracts which call for preliminary system design and prototyping efforts. The JROC approved the ACS Capability Development Document in November 2008.

Unmanned Aircraft Systems (UAS) are a rapidly growing capability that Army Aviation has helped to develop. As an example of how quickly this capability has grown within the Army, when Operation Iraqi Freedom (OIF) began in March 2003, there were only six aircraft deployed in support of that operation. Today, we have more than 1,100 air vehicles in either OIF or OEF. This capability continues its fast growth. For example, it took the Army 13 years to fly the first 100,000 hours of UAVs. It took us less than a year to fly the next 100,000 hours, and we fly more than that each year in theater.

The **Extended Range/Multipurpose (ER/MP) UAS**, or Sky Warrior, will be deployed and integrated with the Combat Aviation Brigade, with immediate responsive Reconnaissance, Surveillance, and Target Acquisition to the division commander.

ER/MP can carry multiple simultaneous payloads to include: (1) Electro-optical/Infrared/Laser Designator; (2) Synthetic Aperture Radar; (3) Communications Relay; and (4) Weapons. ER/MP UAS will use both Tactical Common Data Link and Satellite Communications data links. The program is on track to deploy a Quick Reaction Capability to OIF in July 2009 and another in summer 2010. The Program of Record will field its First Unit Equipped in FY2011.

The hand-launched and rucksack portable **Raven Small Unmanned Aircraft System** (SUAS) provides the small unit with enhanced situational awareness and increased force protection through expanded reconnaissance and surveillance coverage of marginal maneuver areas. Commanders at the company level have greater ability to shape over-the-hill operations with their own dedicated UAS.

The Raven is fielded to the U.S. Special Operations Command, the U.S. Marine Corps, the U.S. Air Force, and the ARNG to provide increased capabilities for domestic mission responsibilities as required. There are over 1,318 Raven SUAS fielded and more than 300 Raven SUAS supporting Soldiers in Iraq and Afghanistan. The program is meeting all cost, schedule, and performance targets.

The **Shadow** Tactical Unmanned Aircraft System (TUAS) provides DoD and coalition partners with a high quality, reliable, and interoperable UAS. Currently, units are flying at an OPTEMPO of up to three times what was originally envisioned for the system. While the OPTEMPO remains high, the accident rate has been reduced each year.

The U.S. Marine Corps is partnered with the Army for purchase of systems, support equipment, and performance based logistics services. Through this approach, economies of scales provide efficiencies for cost, commonality, and joint operations.

Currently, 66 systems have been delivered and fielded to the Army and six to the Marine Corps. The readiness rate of the Shadow system averages above 94 percent. As of March 2009, the total hours flown by Shadow in support of theater operations were 352,101 hours, out of a total program history of 385,118 hours flown. More than 90 percent of all Shadow hours flown since 2000 have been in support of theater operations.

The **Future Combat Systems Class I and Class IV UAS** will provide significantly enhanced capabilities to the force. Class I systems provide a ducted fan capability with a hover and stare capability, allowing the system to stay in one area for an extended period of time with maneuverability into complex environments that would be impractical for current force fixed wing UAS. The system was first developed by the Defense Advanced Research Projects Agency and transitioned to Program Manager Future Combat Systems in 2007 and Program Manager UAS in 2008. Eighteen systems have been fielded to the 25th Infantry Division in OIF.

The Class IV UAS is a brigade-level Vertical Take Off and Landing UAS that provides the brigade commander with a day/night and adverse weather RSTA capability. The Class IV UAS has an endurance of up to 5.3 hours with Vertical Take Off and Landing ability at unprepared and unimproved landing zones. It has the ability to carry multiple sensors simultaneously (up to 600 lbs), and perform onboard processing and sensor cross-cueing while providing streaming video using networks

communications. Class IV capabilities include: minefield detection; moving target indication and sensor cross-cueing; Radio Frequency and Infrared threat detection; meteorological survey; and, Manned/Unmanned teaming. Currently there are no Vertical Take Off and Landing UAS fielded.

CONCLUSION

Today, we have five combat aviation brigades committed to current combat operations with another one deploying in 2009 to Operation Enduring Freedom. We still have an aviation operational presence in the Balkans and the Sinai; we are conducting operations supporting drug interdiction; and we are still committed to maintaining security on the Korean Peninsula. Additionally, we fulfill requirements to support homeland security and defense, humanitarian support missions, and disaster relief. Army Aviation has a very important role in the defense and security of our Nation. With only 19 Active and Reserve Component Combat Aviation Brigades, the demands placed on our aviation crews and aviations systems are heavy. Still, these demands are being met around the clock and around the world by our world-class Soldier Aviators, crewmembers, and aviation systems.

The programs that we have described above have and will continue to provide an improved capability for our Soldiers in the field. We thank Members of this Committee for their advice, guidance, and steadfast support to sustain and continue to modernize Army Aviation.

Mr. BOYD. Thank you very much, General Thompson. I apologize for the noise and the interruptions, but would just like to say we are going to move directly to questions. But I did want to say that all of us on this Committee certainly understand the importance of the work that the folks—that you folks and the folks that work for you in Army Aviation do. And certainly nobody understands that any better than I do, who spent all of my 2 years in uniform in an Army uniform, a lot of it in a helicopter being flown around by guys like you. So we understand the importance of your role in the overall mission.

And so with that, I would like to call on Mr. Frelinghuysen, recognize him for first questions.

ARMY AVIATION BRIGADES

Mr. FRELINGHUYSEN. Thank you. Thank you, Mr. Chairman. Maybe a few basic facts. How many aviation brigades do we have in the Army? And then talk specifically about, General Thompson, you said we sent our Sixth Aviation Brigade to Afghanistan; is that right? Talk about the aviation assets and where they are in Afghanistan and Iraq.

General DAVIS. Yes, sir. Again, there are 11 Active component aviation brigades. There are eight National Guard aviation brigades. There are also six theater-level brigade structures, a general officer over some other structure, and then, sir, we do have some assorted capability that is not resident in a combat aviation brigade structure.

So what we currently have in Iraq are four combat aviation brigades that are deployed in support of Iraq. And as the theater is divided up, you have got a brigade that supports essentially a multinational division sector and then in Baghdad.

And then in Afghanistan, we currently have one combat aviation brigade that is located in Regional Command East in support of the 101st Air Assault Division. The second of two brigades that will go into Afghanistan deploys in the May time frame, the 82nd Combat Aviation Brigade out of Fort Bragg, North Carolina. So that will give us the six combat aviation brigades in theater.

AVIATION OPTEMPO

Mr. FRELINGHUYSEN. The OPTEMPO which was mentioned in your statement—never should downplay it—can you sort of add some emphasis onto what the—I mean these air assets, aviation assets have been under incredible pressure, obviously, as have the men and women who are responsible for them. Can you sort of describe in detail the—what is it—six times the normal—what was the comment you made, General Thompson?

General THOMPSON. Yes, sir. The flying hours on a monthly basis are really three to five, three to six times the average that we would fly in a normal training environment. But despite that, the operational readiness rates of all the helicopter fleets are above the standard of 75 percent. In some cases, they are in the high 80 percent, is our ability to maintain those fleets flying while they are in a combat environment. So I think we have been very successful from that standpoint.

The 75 to sometimes 100 hours a month that these airframes are flying in very harsh conditions is a testimony, first and foremost, to the crews that fly them and the crews that maintain them; but also to the testimony to the support structure that is in place to get them ready to go to be deployed overseas, to maintain them while they are there, and then to reset those airframes when they come back so they are ready to go again.

Mr. FRELINGHUYSEN. What is the combat tour duration for the aviation brigades?

General DAVIS. Right now, sir, just based on the OPTEMPO that you alluded to, and with six brigades going in, the Active component is at about a 1-year to 1.2-year dwell right now. We are on the cusp in terms of the numbers of brigades we have with the operational tempo and the number of brigades that we have committed to the warfight right now.

Mr. FRELINGHUYSEN. So they are getting the dwell time back home. What is the dwell time back home, on the average?

General DAVIS. 1.2 for the Active components, sir, and then—1.2 years for the Active component units, and then 4 years for the Reserve component.

Mr. FRELINGHUYSEN. Could you describe for the Committee the process and timeline for returning Army Aviation assets from the combat theaters to home stations or to the depot maintenance locations for reset? What is the process?

General CROSBY. General Thompson mentioned a moment ago about the sustainment structure that we put in place. One of the things that we have done with my counterpart in the Army Materiel Command, Commander, General Myles, is we send a team over there before the brigade comes home, and we look at their aircraft, go through and plan the scope of the reset that we will do upon their return.

SPECIAL TECHNICAL INSPECTION AND REPAIR (STIR)

Mr. FRELINGHUYSEN. And much of it, obviously, being really beat up as well as it has been maintained, a lot of it is—

General CROSBY. Yes, sir. One of the things I wanted to add to what General Thompson said is that the OPTEMPO that we are flying is such a credit to our soldiers and the fact that they are able to maintain those aircraft at those three to six times the normal OPTEMPO rate. Now, yes, there is some credit to this Committee, to everyone for resourcing them, providing them the additional parts and things they need to do that.

Mr. FRELINGHUYSEN. We credit your mechanics keeping those aircraft—

General CROSBY. Those soldiers are doing just an unbelievable job to do that. We look at them, and yes, sir, some of them do what we call stay behind. They may stay for two rotations if they are in really good shape. And that decision is a joint decision that General Davis' team makes, based upon our input back to them, and what the resourcing and the dwell times need to be for the aircraft.

But we look at them from a reset. There is a scope, what we call a technical bulletin, that we go through. And it was based upon the Special Technical Inspection and Repair (STIR) program that we did from the original Desert Shield and Desert Storm when we

came home. And we called it STIR back them. Now we call it reset. And we go through each of those aircraft and we identify them.

General THOMPSON. STIR is just a technical inspection. The technical bulletin is just the checklist of things that you would do on any piece of equipment. But in this case, it is the aviation systems. You just go right down the list and you check everything from the top of the helicopter all the way down. You make a determination on what it needs in order to put it back into full operational condition.

General CROSBY. And the scope, the reason I brought that up is the scope of that is adaptable to the situation and the theater that they are in. We look at them. That is why we do that prelook. We adapt that scope of the reset. And then there is a target timeline that we have to do and run each of these aircraft through the reset inspection that we do. That is all going on while the unit is preparing, they are having their dwell time back home back with their families. We take those aircraft. Our goal is to only take those aircraft from a unit one time to do any new mods to the aircraft before they go back and to do the reset at once.

We are not there. I will tell you we are not there 100 percent because things change so fast. But our objective is one touch from that unit, to take it away from that unit so that they have it the rest of the time to focus on their training to go back.

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

Mr. BOYD. Mr. Bishop.

MEDICAL EVACUATION

Mr. BISHOP. I am interested in the Medevac capabilities. In January of this year 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 the goal in Iraq was to have a wounded soldier to the hospital within an hour. In Afghanistan, he noted that the times were closer to 2 hours. And of course the Secretary directed increasing the number of Medevac helicopters or medical professionals assigned to Afghanistan.

What are the factors that cause Medevac—I guess it is obvious; it takes significantly longer in Afghanistan than Iraq. I guess it is terrain and mountainous and infrastructure, or lack of infrastructure.

But what are the—what additional Medevac assets, both medical facilities and aircraft, that have actually arrived in Afghanistan, and what additional assets are on the way? And are there remaining shortages with Medevac aircraft, air crews, and forward surgical teams in Afghanistan? And what is the evacuation time today in Afghanistan as compared to what it was back in January? And are there any significant limitations for our helicopters in Afghanistan? And how does that impact your utilization of the Air Force Medevac teams to supplement what the Army has had?

General DAVIS. Congressman, if I could, you are absolutely right; there is a difference with both theaters with respect to the terrain, the geography, the positioning of the assets. And the Secretary, as well as the leadership for all the services, were very concerned. We try to codify as a standard, not a goal, to get a wounded soldier,

sailor, airman, marine, or a coalition force or contractor from point of injury back to medical care within 60 minutes. And so the goal of the Secretary was again to, as you alluded to, sir, was to get parity between the theaters. There were different planning times that both theaters were using.

We have currently put a strategy in place to address that, a bridging strategy, and then a strategy which will get resources in Afghanistan, which will achieve parity. Currently, the average time for evacuation of a soldier, sailor, airman, marine in Iraq is 44 minutes. And currently in Afghanistan it is 71 minutes. And that is primarily related to two regions, Regional Commands East and South right now, where we have the propensity of our forces.

The strategy that was put in place was to accelerate capability into Afghanistan, and do that as quickly as we could, knowing that the 82nd Aviation Brigade, which I mentioned will become the second brigade in Afghanistan, brings additional Medevac capability with it, a company of 12 aircraft.

And so right now what we have done within theater is re-missioned the aircraft from the Air Force, the Combat Search and Rescue aircraft, HH-60s, to conduct a medical evacuation mission. There are two additional forward surgical teams, which gives the medical capability on the ground that they need that have been resourced by both the Army and the Navy. They will re-mission Navy Medevac aircraft as well that are currently resident in Kuwait. They are going to add two more aircraft, and then they are going to re-mission aircraft. And that is to take effect this month.

And so what we will have in May, sir, is when the 82nd Aviation Brigade gets in there, they estimated and have projected that they will achieve the 60-minute standard for evacuation with the additional Medevac company that comes in with the 82nd and with the additional re-missioning and forward surgical teams.

Mr. BISHOP. Is that going to be accomplished? And I want to congratulate you for moving from 120 minutes to 71 minutes in 3 months. That is great. And it serves our wounded warriors very well.

Is the increase in times a direct function of the additional assets, or is it a function of the assets plus prepositioning of assets in particular locations around Afghanistan closer to the fight? What is accounting for that drop.

General DAVIS. Yes, sir, it will be additional assets, which will allow them to have more locations where they can put assets. And again, as we see additional troop increases in Regional Command South, that is where that additional aviation brigade will go in as well. But it is a combination of increased assets as well as certainly working the tactics, techniques, and procedures, and the procedural issues from the time that a mission actually occurs and the process that the request has to go through. And they are going to do that not with just U.S. forces, but with our NATO forces that are there as well. So it is a combination of those things, sir.

Mr. BISHOP. What about additional hospitals, medical facilities? Are you putting in additional medical facilities also?

General THOMPSON. Yes, sir. It is not just the aviation assets. Because what you heard General Davis indicate is the increased Medevac company from the Army and the additional Air Force

search-and-rescue aircraft and re-missioning of those and the Navy assets. But also it is the additional forward surgical teams, which is the top-level surgical care.

As they looked at the positioning of those teams in theater, there has already been an additional Army surgical team put in theater. On its way is an additional second Army surgical team and a Navy surgical team. So it is putting the medical assets where they are needed in theater, and then working the combination of where the medical assets are, and then where the Medevac assets are in order to get the wounded service members and contractors back to the surgical care as quickly as possible.

Mr. BISHOP. Thank you very much. And I appreciate your quick response in improving that response time. Thank you, Mr. Chairman.

Mr. BOYD. Thank you, Mr. Bishop. Mr. Tiahrt.

AERIAL COMMON SENSOR

Mr. TIAHRT. Thank you, Mr. Chairman. Welcome, gentlemen. Thank you for your service to the country. I appreciate it very much.

General Thompson, in your written testimony you talked about the ACS, Aerial Common Sensor program, and you say that is it is awaiting Defense Acquisition Executive approval. What does that mean? What is the tent pole here on ACS?

General THOMPSON. Sir, on Aerial Common Sensor, the competitive acquisition strategy to take the mission equipment package and mount it on an airframe is going to be done through a technology development phase. All of the documentation necessary to make that decision have been laid out. I expect in the next week to 10 days Mr. Young, the Defense Acquisition Executive, will be able to take final action on approving that acquisition strategy so that we can go out and begin the competitive process with the industry out there.

Mr. TIAHRT. Isn't the electronics pretty well determined? I mean, isn't it already palletized?

General THOMPSON. It is. The mission packages are pretty well known. It is the integration of those mission packages onto a different airframe.

Mr. TIAHRT. In the first go-round, the airframe could not handle the heat and weight as I recall.

General THOMPSON. That is correct.

Mr. TIAHRT. And we have not come up with an alternate for the airframe? Because you mentioned—one thing I am a little—you mentioned the Unmanned Aerial Systems in the next paragraph, under the same heading, almost as if you could substitute the mission for a UAV or UAS. And I think that your package is too big to put on any single UAS. And I think having the personnel on board with all the equipment and integration is pretty important, as I understand.

General THOMPSON. Yes, sir. You are exactly right. And I will talk for just a minute, and then I will let General Davis add to that. But it is the manned and unmanned teaming as we described it. It is the combination of the Unmanned Aerial Systems with the

sensors that are appropriately on there, and then the manned systems.

Today it is Guardrail Common Sensor and Airborne Reconnaissance low-ARL and some other systems that have been bought, in particular for use inside of Iraq. But it is the combination of the manned and unmanned teaming. As much as possible, we like to use common sensor packages that we can mount on both unmanned systems and a manned system. But the operators on the Aerial Common Sensor program allow us to take that sensor information and to process this and to get it quickly to the operational commanders on the ground who can use that.

Mr. TIAHRT. Excuse me for interrupting, General, because I have limited time. I do not know what, when we say we are awaiting, is there a schedule for Mr. Young to rule on this, or is it just still in limbo?

General THOMPSON. No, sir, there is a schedule, and it is tied to the final deliberations on submission of the fiscal year 2010 budget.

Mr. TIAHRT. Okay. So it is tied to the budget.

General THOMPSON. It is in its final stages right now. Then that will trigger his ability to be able to sign the document that allows us to go forward.

LIGHT UTILITY HELICOPTER

Mr. TIAHRT. All right. The other question I had was in relationship to the Light Utility Helicopter. You mentioned in your statement here that the schedule is to begin in April to transition some of this work from Germany to Columbus, Georgia—Mississippi. Columbus, Mississippi, I am sorry.

When you say the schedule is to begin, what does “begin” mean? Does that mean they are going to have a ground breaking, or are they going to transition manufacturing to an existing facility that has been certified by the FAA?

General CROSBY. I will take that one, sir. Most of the assembly today is done at that plant in Columbus, Mississippi. The date that you mention that you talk about will be the first one that is started and finished in that facility.

Some of it today, just in schedule as the program was laid out, was still assembled or built in Germany and shipped to the facility in Columbus for final assembly. The date that you mentioned, I believe it is this summer, April, that first aircraft will go through the entire assembly, from the first rivet all the way to delivery, at that Columbus facility. All American.

Mr. TIAHRT. The 65 percent goal that you mentioned is that dollar amount, or is that work content?

General CROSBY. Sir, I believe that is work content.

Mr. TIAHRT. Because I want to remind you that when we have a Buy American provision, we think of American jobs not just in tech orders and spares and logistics support and warehousing and inventory and training, we are thinking about manufacturing content. And I have a real concern with the company that is doing this, because just recently there was an—ICE, Incorporated, won a lawsuit against EADS over the A-400 on an avionics package. During the bidding process, they asked for technical data and for financial—you know, how much it is going to cost. And then once they

received that and successfully won a package, then they pull that content back to Germany and hold onto it. And they take the technical data and give it to a European supplier. In this case, it was a French supplier. And our courts ruled in favor of them. And I do not know what the settlement is going to be yet, but it is a loss of intellectual property. And I think we are seeing it in the Light Utility Helicopter, as well with the airframe.

They took work content packages, technical data, pricing data from Spirit AeroSystems, and then they pulled it back to Europe, and they are making the airframe in Germany now, which is what that was for. And they are using the manufacturing plan and the technical data and the cost package for their German company, and it is a subsidized process.

So Buy American provision to us means work content, it does not mean dollar value. I want to make that clear. So I am glad you are using work content, because that is the intent I think that we have. But I am very concerned about the loss of intellectual property, where in the bidding process what they demand from their subs is something they can take right over to their manufacturers in Europe and put it into a manufacturing process. And our tax dollars end up creating a stronger economy in France and Germany than it does in America.

And right now, every one of us in this room represents people who are laid off because of our economy going south. And we want to get those jobs back. But we can't if we allow intellectual property—so please guard intellectual property in the way you write your RFPs and set your contracts.

General THOMPSON. Yes, sir.

Mr. TIAHRT. Thank you, Mr. Chairman.

Mr. BOYD. Thank you, Mr. Tiahart. Ms. Kaptur.

PERSONNEL IN THEATER

Ms. KAPTUR. Thank you, Mr. Chairman. Welcome, gentlemen, and thank you for your service to our country. I thank you for your testimony.

I just reflect that it seems to be more equipment-oriented rather than what I would call mission-oriented. And I want to get into mission a little bit if I could. Would you please tell me from Army Air how many personnel are currently assigned in the Iraqi theater versus the Afghani theater? Approximately.

General DAVIS. I am sorry, ma'am, I do not have the exact number. But typically in the brigade in Afghanistan, it is going to be roughly about 2,500 to 3,000. And then four times that amount in Iraq. So roughly 10,000. I apologize, ma'am. I will get the exact number and I will bring that back.

[The information follows:]

The United States Army Human Resources Command (HRC) receives a monthly roster, by Social Security Numer, of deployed Active Duty personnel receiving Hostile Fire Pay. This information is gathered from Defense Finance and Accounting Service (DFAS) and Deployed Theater Accountability System (DTAS). It includes all Active Duty personnel in the Iraqi and Afghanistan theaters. The Reserve Component (RC) information has been collected from both the "Stress on the Force Data Set" and the Total Army Personnel Data Base-Reserve (TAPDB-R). The Reserve Component (RC) information is broken down into two categories. The first category contains the numbers for Deployed Individual Ready Reserves (IRR) and Individual

Mobilization Augmentee (IMA) Soldiers. The second category contains the numbers for Mobilized Individual Ready Reserves (IRR) and Individual Mobilization Augmentee (IMA) Soldiers. Enclosed below is the information for all Aviators (15 series (Military Occupational Specialty) MOSs and 67J (MEDEVAC Pilot) MOS) that are currently deployed or mobilized, whether they are on Joint Manning Document (JMD), Worldwide Individual Augmentee System (WIAS), etc. or in an Aviation Brigade.

As of 8 April 2009, there are a total of 1099 warrant officers, 670 commissioned officers, and 4071 enlisted Soldiers deployed in both theaters. The numbers for Active Duty personnel in each theater are as follows: 318 warrant officers in OEF, 781 in OIF, 191 commissioned officers in Operation Enduring Freedom (OEF), 479 in Operation Iraqi Freedom (OIF), 1109 enlisted Soldiers in OEF, and 2962 in OIF.

The following information for Reserve Component (RC) personnel is as of 8 May 2009. There are a total of 8 deployed warrant officers (2 in OEF and 6 in OIF); 6 deployed commissioned officers (2 in OEF and 4 in OIF); 30 deployed enlisted personnel (4 in OEF and 26 in OIF); 44 mobilized warrant officers (23 in OEF and 21 in OIF); 108 mobilized commissioned officers (72 in OEF and 36 in OIF); and 113 mobilized enlisted personnel (14 in OEF and 99 in OIF).

	W01	CW2	CW3	CW4	CW5	Total
OEF	7	166	87	44	14	318
OIF	21	448	183	103	26	781
Total	28	614	270	147	40	1099

	1LT	CPT	MAJ	LTC	COL	Total
OEF	26	98	41	16	10	191
OIF	56	257	101	50	15	479
Total	82	355	142	66	25	670

	E01	E02	E03	E04	E05	E06	E07	E08	E09	Total
OEF	1	14	126	457	253	149	74	31	4	1109
OIF	10	50	266	1347	666	335	213	70	5	2962
Total	11	64	392	1804	919	484	287	101	9	4071

DEPLOYED (IRR AND IMA SOLDIERS)

	W01	CW2	CW3	CW4	CW5	Total
OEF	0	1	0	0	1	2
OIF	0	3	3	0	0	6
Total	0	4	3	0	1	8

	1LT	CPT	MAJ	LTC	COL	Total
OEF	0	1	0	0	1	2
OIF	0	0	1	2	1	4
Total	0	1	1	2	2	6

	E01	E02	E03	E04	E05	E06	E07	E08	E09	Total
OEF	0	0	0	3	1	0	0	0	0	4
OIF	0	0	3	13	7	1	1	0	1	26
Total	0	0	3	16	8	1	1	0	1	30

Source: TAPDB-R and "Stress To Force Data Set".

MOBILIZED (IRR AND IMA SOLDIERS)

	WO1	CW2	CW3	CW4	CW5	Total
OEF	0	2	2	16	3	23
OIF	0	5	9	7	0	21
Total	0	7	11	23	3	44

	1LT	CPT	MAJ	LTC	COL	Total
OEF	1	1	21	34	15	72
OIF	0	4	22	9	1	36
Total	1	5	43	43	16	108

	E01	E02	E03	E04	E05	E06	E07	E08	E09	Total
OEF	0	0	1	3	2	0	3	4	1	14
OIF	0	4	16	52	23	1	2	0	1	99
Total	0	4	17	55	25	1	5	4	2	113

Source: TAPDB-R.

General THOMPSON. What he is giving you, ma'am, is the number of soldiers typically assigned to an aviation brigade, and then the number of aviation brigades in theater. It is 2,500 and roughly 10,000.

BASES AND STAGING AREAS

Ms. KAPTUR. All right. That is very helpful information. At how many separate bases or staging areas is your equipment and your personnel staged in both the Iraqi theater and the Afghani theater? And that can go outside the boundaries of the country. But at how many separate bases or staging areas is your equipment and your personnel placed in each of those theaters, again trying get a sense of the mission versus just equipment?

General DAVIS. In Afghanistan there is typically one major staging for the aviation brigade itself. And then it will be split out into battalion-size task forces. So probably another three or four different locations for the aviation in Afghanistan. In Iraq, There are four major areas there. And they have also got their assets split out. I do not know exactly how many bases.

Ms. KAPTUR. Those are all in each of those countries, inside the countries?

General DAVIS. Yes.

Ms. KAPTUR. All right. Thank you.

General THOMPSON. And ma'am, it is really dictated by the operational conditions on the ground. So it is always a balance between the operational commander needing attack assets or lift assets or Medevac assets in a certain amount of time.

The other part of the balance is the centralization and the emphasis that we put on the maintenance of the aircraft and the supply and the maintenance systems. It is always that tension that dictates the positioning.

The thing that always wins the day is where the operational commander needs assets so they can be responsive to his mission requirements. Then we figure out where the logistical positioning

is. But there is that balance that goes on all the time that is really driven by the operational commander on the ground.

VULNERABILITIES

Ms. KAPTUR. In looking at both Iraq and the Afghani theaters, what do you consider your greatest vulnerabilities in each of those theaters today?

General THOMPSON. I guess I would answer this in a general way. There are the very harsh conditions driven by, the weather and the sand and the terrain that put the wear and tear on the aircraft. From the standpoint of what causes aircraft to be hit and shot down, it is small arms fire, in some cases RPGs. The exact details of how we lose aircraft overseas, because we have lost 162 aircraft.

Ms. KAPTUR. How many again, General?

General THOMPSON. 162 since the beginning of combat operations in Iraq and Afghanistan.

Ms. KAPTUR. How many? I didn't hear.

General THOMPSON. 162.

Ms. KAPTUR. 162. Mostly in Iraq?

General THOMPSON. Mostly in Iraq so far, because that is where the bulk of the aviation assets have been since we started Operation Iraqi Freedom. But the exact details of what causes us to lose aircraft are something that we can talk about, but I would not want to talk about that in this hearing. I would want to talk about that in a classified hearing or a classified discussion.

SKY WARRIOR

Ms. KAPTUR. How important is the Sky Warrior Unmanned Aircraft System to your operations in Afghanistan?

General DAVIS. Ma'am, it is very important. I mean it is integrated in both theaters, certainly at the theater level and also at the division level in the case of Afghanistan. So it is a great capability. There are two variants, early variants of the Sky Warrior Extended Range/Multipurpose that are in Afghanistan and Iraq right now. So there are 13 total aircraft, but it is very, very important to the integration of the reconnaissance, surveillance, and target acquisition mission that the theater performs.

Ms. KAPTUR. Excuse me, General, 13 between both theaters?

General DAVIS. That is correct.

Ms. KAPTUR. All right. How many do you have in Iraq?

General DAVIS. We have ten air vehicles in Iraq and three in Afghanistan.

Ms. KAPTUR. How many of those have been destroyed in combat operations to date? And while you are looking for that, could I ask you, are the Sky Warriors that are based in Iraq and Afghanistan flown by Army personnel or by contractors?

General DAVIS. A combination of contractor and Army personnel.

Ms. KAPTUR. Which contractors? What firms?

General DAVIS. General Atomics is the prime contractor.

Ms. KAPTUR. What Tomics?

General DAVIS. General Atomics, a-t-o-m-i-c-s.

General CROSBY. They are the OEM, original equipment manufacturer, for the system. We sub to them. It is what General Davis

is talking about GOCO; it is government owned, contractor operated, in those two locations. We are actively training our soldiers to take over that mission.

Ms. KAPTUR. I was going to ask you whether the UAV operators are pilots.

General CROSBY. They are not. They are sergeants for the Army.

General DAVIS. We are training the first of the enlisted operators for the first variant or the preproduction ER/MP right now at El Mirage, California. But they are enlisted operators of those air vehicles.

Ms. KAPTUR. I think my time has probably expired. Do you anticipate replacing the contracted personnel, then, with enlisted personnel?

General DAVIS. Over time, yes, ma'am, we sure do.

Ms. KAPTUR. Over how much time?

General DAVIS. Ma'am, I do not have an exact timeline, but again, we are on the leading edge of training the enlisted operators for those right now.

General CROSBY. We are putting in fielding the quick reaction capability over there, the first one due to arrive this summer. And it will be soldiers. As you know, ma'am, the UAS, that is a new area for us. And we are learning and developing tactics, techniques, and procedures on how these things are engaging. And we are learning so much: what affects the structure, the quantity, the number of systems that need to be fielded, where we put them, where we station them to provide that soldier the information on the battlefield.

Those three units that General Davis talked about are giving us that direct feedback. Even though they are contractor operated, we are getting that feedback from the soldier for the future. And that guides us how we will build and construct the other systems. So it is a learn as we go here. But what we do know is it is a great asset to put in the hands of our soldiers.

Ms. KAPTUR. Thank you. Thank you, Mr. Chairman.

Mr. BOYD. Thank you, Ms. Kaptur. Mr. Visclosky.

Mr. VISCLOSKY. Thank you, Mr. Chairman. Have questions been asked on the Joint Cargo Aircraft?

Mr. BOYD. No.

JOINT CARGO AIRCRAFT

Mr. VISCLOSKY. Okay. Gentlemen, how many of the Joint Cargo Aircraft does the Army plan to buy? And do you know what the Air Force number is?

General DAVIS. The total requirement, sir, is 78; 54 for the Army right now, and 24 for the Air Force. I do not know the Air Force acquisition strategy right now for the Joint Cargo Aircraft. But our number is 54.

Mr. VISCLOSKY. Do you know, is there an interrelationship? If the Army ends up buying more, would the Air Force buy less or vice versa?

General CROSBY. I think that is left to be determined.

Mr. VISCLOSKY. Do you have any communication going on with the Air Force to—

General CROSBY. Yes, sir. And there is another one that is thrown into that; the Special Operations community is also now coming on line. So those are all yet to be determined. The validated requirement we have in the Army is, as General Davis said, for 78. How that need is met in the mix between the Army and the Air Force is to be determined. I think the QDR is going to address part of that.

General THOMPSON. Now, just a correction. The total validated requirement is 75 right now, 54 of those for the Army and the others for the Air Force. What General Crosby is alluding to, the Special Operations community is looking at that aircraft and the potential use of that aircraft for their missions. So that number may adjust a little bit from the requirements perspective. But right now, our plan is to procure 54 for dedicated Army use. The first two have been delivered.

Mr. VISCLOSKY. Twenty-one would be Air Force. And potentially, if Special Operations get involved, the total number of 75 could potentially go higher.

General THOMPSON. It could, sir. The 21 for the Air Force—because the Air Force on fixed wing assets flies the Special Operations missions with their units—so some of those 21 could be re-missioned from the delivery of time-sensitive, mission-critical cargo, which is the requirement, they could be re-missioned to Special Operations needs. But that has not been firmly determined yet from the requirements process.

Mr. VISCLOSKY. And are these planes being assembled at this time? Have you had any deliveries yet?

General CROSBY. Yes, sir. We have had two delivered. In fact, I am being beckoned to come speak at the graduation of the first pilots and crew members next week to take over those two aircraft. We have, I think, 11 on contract currently. But at this point, only two have been delivered.

Mr. VISCLOSKY. And where does the assembly take place? Where does the integration of military hardware package take place?

General CROSBY. Today everything is done by Alenia in Italy.

Mr. VISCLOSKY. And that is an Italian corporation as well?

General CROSBY. Yes, sir. Partnered through L3 here in the United States. As planned in the overall strategy, the groundbreaking ceremony for the new facility in Jacksonville, Florida is set for the 24th of April, which I will attend. And then I believe the first deliveries from that facility are in fiscal year 2013.

Mr. VISCLOSKY. And how long will the purchase of these craft extend out to? What would be your plan at this point in time?

General THOMPSON. Sir, the Army is funded through fiscal year 2013 for the 54 aircraft.

Mr. VISCLOSKY. Why some assembly in Italy, why the rest in Jacksonville?

General THOMPSON. To bring the capability on shore. When we did the competitive award of the contract, they won the competitive award. But part of the competitive award was to do the mission assembly in the United States. That is going on in Waco, Texas right now. Then as General Crosby alluded to, building the production facility in Jacksonville, Florida. We would build the back end of the 54 aircraft, the bulk of them, here in the United States.

Mr. VISCLOSKY. Just out of curiosity, it is an Italian corporation. Did American manufacturers bid on it and they did not win a contract?

General CROSBY. The contract is an American corporation. They are partnered with L3. L3 is the prime.

Mr. VISCLOSKY. Is the prime?

General CROSBY. Yes, sir.

Mr. VISCLOSKY. But the assembly is taking place in Italy?

General CROSBY. Initially, yes, sir. Very similar to what happened with the Light Utility Helicopter. That is being transitioned to the United States, in accordance with the plan. They will build a facility in Jacksonville. First orders in fiscal year 2010, I believe, and delivered thereafter.

Mr. VISCLOSKY. With all the aircraft manufacturing, I am just curious at this point—forget the aircraft. With all the aircraft that have been produced in the United States, we are here in 2007, 2008, 2009, and there are at least a couple of aircraft where the initial assembly and production are taking place overseas because they have won a contract, they have an expertise. What is happening here? What has happened? What is happening?

General THOMPSON. Well, sir, the first thing we do is we put out a competitive procurement. So in this particular case, other companies bid on this aircraft. But through the competitive source selection process they were not the winners. It was L3, teamed with Alenia, that won the Joint Cargo Aircraft competition.

Mr. VISCLOSKY. I am not criticizing the process.

General THOMPSON. Right.

Mr. VISCLOSKY. I am saying how has this happened that at least in a couple of aircraft enumerated here, Mr. Tiaht had a series of questions about intellectual property, that all this is going offshore? Although, albeit it is coming back, but it started offshore. How have we found ourselves in this spot as an industrial base? I am asking an industrial base question. Any—

General THOMPSON. I think—

Mr. VISCLOSKY. It leaves me speechless, too, I got to tell you.

General THOMPSON. Part of it is the whole globalization of industry. In this particular case they won a fair and open competition. We are trying to get as much of that work content brought back in the United States. We gave the 65 percent numbers for the LUH program. We are bringing the assembly of the Joint Cargo Aircraft on shore and building a facility in Jacksonville, Florida. But, if you look in any of the defense industries today, most them are teamed with global firms; most of those global firms in Europe.

Mr. VISCLOSKY. Is part of that to make sure they can compete in other countries as well then?

General THOMPSON. I am sorry?

Mr. VISCLOSKY. Is that to assist them in their competition in other countries, do you think, or is it a lack of expertise? From an industrial base standpoint. Forget the contract, forget the cargo aircraft.

General CROSBY. For this one, Alenia plans to come here. And in all of their future sales of this aircraft, they plan sales worldwide would be for those delivered from Jacksonville. So the American workers are going to get the benefit of doing this and providing

this, and hopefully the suppliers within our country to support that. Again, as you say, this is much bigger an industrial base issue. But we are keeping our technology, our folks in this country, working to do that.

Now, both of these systems, when we talk about intellectual properties, both of these systems are, if you will, off the shelf, already designed, existing systems out there. And that was one of the things that made them attractive in their cost, and why, frankly, that they won these competitive contracts, because they already were in existence. So we are not losing the technological edge to develop something that is not out there and stimulating our technology base. These were systems that are already in existence.

Mr. VISCLOSKY. Okay. Gentlemen, thank you. Thank you, Mr. Chairman.

Mr. BOYD. Thank you, Mr. Visclosky. Mr. Frelinghuysen.

UNMANNED AERIAL SYSTEMS

Mr. FRELINGHUYSEN. I sort of want to get back, if I could, to some of the unmanned aerial programs. You have got the Sky Warrior, you have got the Shadow, you have got the Raven, you have got some tied to the FCS, the Maverick, and you have got something called the Fire Scout. And then the Air Force has its aviation assets.

Can you talk a little bit about airspace coordination? There is a lot of stuff up there. I just sort of—can you make some general comments? And as we shift to Afghanistan, which has been, as we said, sort of asset bereft until recently, what is the likely picture going to look like over there in terms of unmanned assets?

AIRSPACE COORDINATION

General DAVIS. Yes, sir. Just to talk to airspace, in general, sir, I mean the airspace coordination is going quite well, actually. There are a lot of assets that occupy the airspace, both as the Air Force would term, above a coordinating altitude and below that, at more of a tactical level at the lower altitudes. And so you have the small-sized aircraft, the Raven that you mentioned, that not just the Army is using.

Mr. FRELINGHUYSEN. I want you in a few minutes to tell me the story of Raven, how well it has been utilized. Give me the overview.

General DAVIS. So the small aircraft like the Raven, the hand-held piece; and then at the brigade level, sir, of course we have the Shadow aircraft, which you had mentioned, a little larger aircraft. And then certainly at the higher levels where you have the Cessna 172-sized aircraft for the Air Force's Predator and the Army's Extended Range/Multipurpose, but those procedures are worked, again, between the services. We have elements that are located in our combat aviation brigade that work those procedures.

Mr. FRELINGHUYSEN. So you have people manning these systems. As you have said to Ms. Kaptur, some are contractors, some are NCOs.

General DAVIS. Yes, sir.

Mr. FRELINGHUYSEN. The Air Force has, you know, Creech and their pilots who operate.

General DAVIS. They do, sir. They are operating from a remote location. As you know, of course, they have assets physically in theater, though.

Mr. FRELINGHUYSEN. Some of these assets are physically in—

General DAVIS. They do, sir, for the take-off and landing piece, and they hand over the control of the air vehicle back to Creech Air Force Base and/or Nellis Air Force Base for those. But again, sir, in general the airspace procedures are working very well in, as you alluded to, crowded airspace.

Mr. FRELINGHUYSEN. Are things complicated in a country like Afghanistan just because of the nature of the topography? Beside, obviously, you know, climatic and weather and—

General DAVIS. It is complicated by that, sir. But having said that, again as you alluded to, it is a larger area, and you actually have less assets there in terms of numbers.

Mr. FRELINGHUYSEN. But a likelihood of more assets.

General DAVIS. We do. With the aviation brigade that is coming in in the May time frame, there will be more rotary wing assets and some additional Unmanned Aircraft Systems as well, yes, sir.

FUTURE COMBAT SYSTEMS

Mr. FRELINGHUYSEN. I am a supporter of the Future Combat Systems, so I do not ask this question in any but a positive sense. I want to see it come to life. I want to see it fully developed. The systems we have out there now, some of which I mentioned, how many are compatible with, should we say, the Future Combat Systems?

General CROSBY. I can take that, sir. There are two—if I could. I know you are asking about all of them. But I will take just a second to try and summarize quickly what all we have.

Mr. FRELINGHUYSEN. I like the notion that whatever we are doing now, you know, in Iraq and Afghanistan—go ahead, please.

General CROSBY. Yes, sir. The Raven is the small UAV. The Shadow is the next one up the line, which is operated by soldiers. Both operated by soldiers. Next up is the Warrior that we talked about. Then there are the two that are in the FCS bundle, if you will, the Class I and the Class IV.

Mr. FRELINGHUYSEN. Some of those systems have been deployed; is that right?

General CROSBY. Correct, sir. The Class I is the MAV, Micro Air Vehicle.

Mr. FRELINGHUYSEN. That is the Maverick?

General CROSBY. It is. They call it the MAV, Micro Air Vehicle. It has been deployed in an pre-production configuration, again to give us that feedback in learning, and is supposed to be part of the spin-out.

Mr. FRELINGHUYSEN. It has been deployed in Iraq, I understand.

General CROSBY. Yes, sir.

Mr. FRELINGHUYSEN. Eighteen systems according to—

General CROSBY. There are actually 16 deployed of the 18 that we have. The other two will have the actual gimbal and will have the tactical data link that will give it the interoperability that it is supposed to have with the FCS systems. All the other systems are not currently today compatible directly with the FCS, except

that they will use the one system ground control station. And the digital data link, once employed, will give them the ability to share that data with the FCS network.

Mr. FRELINGHUYSEN. But you are desirous of Future Combat Systems as a system of systems.

General CROSBY. Absolutely, sir.

Mr. FRELINGHUYSEN. So there would be, obviously, a push towards compatibility.

General CROSBY. Correct, sir. I will not tell you they are all resourced today. We are looking at them. OSD has been very active in having us look at the joint arena across the platforms and being able to focus. Our goal is to go through one common ground control station, which will then allow us to share the data across the different platforms.

One of the big successes we have had in the Army is called the One System Ground Control Station and the One System Remote Video Terminal, which is out there. We fielded thousands of them, that the soldiers are getting these feeds directly in their hands, real time.

RAVEN

Mr. FRELINGHUYSEN. With the Chairman's indulgence, would you describe the Raven?

General CROSBY. The Raven is the small man-pack transportable UAS. Operates off a battery. It has got a small EOI sensor. It is man-packed.

General THOMPSON. Small electro-optic/infrared sensor.

General CROSBY. I am sorry. I forget these acronyms. The Army acquisition objective is 2,182, and the procurement objective is 2,096. Today we have 1,318 of those systems. And when I say systems, we talk about Ground Control Station, Air Vehicle, all of that as a system. They are fielded to date. And of that, with the small UAV, we have 1,059 systems. As I said, 291 of those systems are deployed.

General DAVIS. Sir, roughly 800 air vehicles are between Iraq and Afghanistan. And again, they are invaluable.

Mr. FRELINGHUYSEN. Are they equally successful in both?

General DAVIS. They are, sir. They are invaluable to our brigade combat teams, particularly at the platoon or company battalion level, at the lowest level, where our ground forces are reliant on having some eyes that they can get on for their missions and their targets. So they are invaluable.

General CROSBY. We in Aviation manage them, but those systems, the small UAV are in the hands of the infantrymen.

Mr. FRELINGHUYSEN. Literally.

General CROSBY. Yes, sir.

Mr. FRELINGHUYSEN. That is great.

General THOMPSON. If I can give just sort of some perspective here, the Raven is the small UAV that is at the platoon and the company level. That is why there are more of them. The Shadow, pretty much at the battalion, sometimes at the brigade level. The Warrior and the ER/MP, which is the follow-on to the Warrior, at the division or more at the theater level.

So small to large; lower-level tactical units to the larger-level tactical units, all of those UAVs and the two that are part of the FCS program, the Micro Air Vehicle, which looks like a flying ball, and the Class IV UAV, which is a helicopter-like unmanned aerial vehicle, those two are part of the FCS program.

The early preproduction models of the smaller one are being used in Iraq today. The intent with the FCS program is to integrate and be able to use all of the assets that are out there, not just the ones that are being developed as part of the FCS program, those two UAVs, but all of the assets that are out there today, Ravens, Shadows, ER/MP, to be able to integrate and operate and get the sensor information off of all those platforms, bring it into the network, and feed that to where it needs to be for the operational commander on the ground, all the way down to the company level or even below.

Mr. FRELINGHUYSEN. I am glad to hear it. Thank you, Mr. Chairman.

Mr. BOYD. Thank you, Mr. Frelinghuysen. Mr. Visclosky.

Mr. VISCLOSKY. I am done, Mr. Chairman.

Mr. BOYD. Mr. Tiaht.

Mr. TIAHRT. Thank you, Mr. Chairman. On the ACS again, in your testimony you talk about awaiting Defense Acquisition Executive approval to release the technology development request for proposal. And the source selection will result in the award of two competing technical development contracts, which will be preliminary designed and prototyping efforts.

Mr. TIAHRT. Now, these are the—are these two integration packages? Because we talked earlier about some of the pallets are complete, or I think they are—if I understand correctly, they are pretty much complete. So is the technical development just the integration package?

General THOMPSON. Yes, sir. The challenge on the Aerial Common Sensor program is to integrate what is mostly the existing sensor packages onto a different airframe.

Mr. TIAHRT. Are these sensor packages going to be GFE or are they included in the technical development?

General CROSBY. I believe the acquisition strategy supports the sensors being developed independently of the airframe. And then, as General Thompson said, the challenge will be integration of all of those systems. I am not sure, because I don't manage that program, whether the sensors are GFE or not. But I will take that for the record.

[The information follows:]

The sensors integrated onto the Aerial Common Sensor (ACS) will be competitively procured and selected by the respective contractor teams during the Technology Development phase. The Government does plan to provide the following subsystems to each contractor team as Government Furnished Equipment (GFE): Multi-Role Tactical Common Data Link (MR-TCDL); Distributive Common Ground Station—Army (DCGS-A) software; and the Communications High-Accuracy Location System (CHALS) precision geolocation system. Providing these subsystems to the vendors will reduce integration risks and shorten system acquisition time.

Mr. TIAHRT. What about the airframe? Is it going to be GFE? You are not developing an airframe. You are going to take an existing aircraft. Have you already selected the aircraft?

General CROSBY. We have not, sir.

General THOMPSON. We have not selected the aircraft.

Mr. TIAHRT. Is that up to the integrator, to select the package it will be carried on?

General THOMPSON. The intent would be for the two that we take into the technology development phase and then pick one of those to go into the systems development, would be to competitively award to an integrator to bring those sensor packages onto an airframe. And that is the source selection.

Mr. TIAHRT. These technology development packages are absent of the system integration and the airframe? Is it just the pallets that we are still working on here? I am just trying to figure out where this is in the process.

General CROSBY. Sir, I believe that the challenge and what will be done during that technology development phase, as you say, those sensors themselves are in existence. But what we have not done is put them all on a single platform, as you alluded to earlier. Therein lies the challenge of being able to manage with a man in the loop or a woman in the loop, in the back, managing all that aspect.

The centrifusion is the challenge of integrating all of those capabilities. We have got sensors out there that, as you say, could be GFE. But the integration of all those sensors will be the challenge.

General THOMPSON. Part of the acquisition strategy is you have two get manned capabilities today, the Guardrail Common Sensor and the Airborne Reconnaissance Low-ARL-program. Those are two fixed-wing manned ISR assets today. A lot of the sensor packages and those will be brought over and integrated into the new platform, plus as we upgrade those and put other capabilities on there.

So the intent, Congressman Tiahrt, is to leverage all of the existing center packages and drive towards commonality as much as possible, and mount those onto a new airframe, because the current airframes on the Guardrail and ARL have got a lot of wear and tear and a lot of age on there, so it is to upgrade that capability. Then to right size the ISR capability from the standpoint of how many platforms we have got out there.

Mr. TIAHRT. So the integrator, though, will make some of these decisions on which technical packages to include—or you are combining certain packages already that have been selected, you just—are you upgrading those individual packages, like what is on Guardrail versus—

General THOMPSON. Yes, sir, we are. From a requirements perspective, the government will decide what packages it wants integrated and then work with whatever the industry team is to do the technical work, to make sure that happens onto the airframe.

Mr. TIAHRT. And you won't be selecting an aircraft; it will be up to the integrator? Or will the Army select an airframe?

General THOMPSON. Well, the multiple industry competitors that compete for this will propose an airframe and we will decide what is the best one based on the source selection criteria, again, mapping back to the requirements. We take the requirements; we write into contract language what we would like to buy; and then we do a competitive process and evaluate the multiple competitors, two or more against those requirements; and then pick the best one based on a best guidance position.

Mr. TIAHRT. Will you consider leasing airframes? Or will you want to purchase them?

General THOMPSON. Currently, the acquisition strategy is not to lease airframes, it is to purchase airframes.

Mr. TIAHRT. It is to buy them. All right. Thank you, Mr. Chairman.

CH-47 HELICOPTER

Mr. BOYD. Thank you Mr. Tiahrt.

General, I have three questions I want to ask regarding issues I don't think have been covered. I want to thank the members, first of all, for the very good questions.

But my first one has to do—and if you will give us sort of an overview of the use of the CH-47 and its role in our mission and where we are going as it relates to Future Combat Systems and the Heavy Lift project that you may have on the drawing board. That is question number one.

The other is that you made reference to—well, let's do them one at a time. I will just do the Chinook first. Explain to the committee what the CH-47 is and how it is used in the mission.

General DAVIS. Yes, sir. The 47—and again, we have got our first F models that are in theater now. But it is performing extraordinarily well. Sir, a medium-lift aircraft—I mean, the testimony from the commanders on the ground—and I would cite the former commander of the 101st Aviation Brigade in Afghanistan—he claimed it was the center of gravity for his force on the ground. Not just the aviation, but certainly in support of ground combat operations in terms of its flexibility and versatility and what it can lift, how much it can lift; its ability to operate at high altitudes in terms of those types of very important missions that it does. And particularly the F model, which is just a fantastic capability that they have right now. So they are reliant on this airframe in Afghanistan.

Certainly, Congressman Boyd, as you have alluded to, the fielding of Joint Cargo Aircraft would perhaps take pressure off of our rotary wing fleet that we have that are doing many of the mission-critical, time-sensitive missions for resupply operations, that type of thing.

Mr. BOYD. But you don't see it totally replacing that?

General DAVIS. No, sir, not at all.

AIRFRAME LIFE

Mr. BOYD. So basically for the committee, the CH-47 is an in-theater transport, used to transport men, equipment, supplies, whatever, even sometimes weapon systems.

Okay. The second question has to do with a comment I read, General Thompson, in your prepared statement. And that has to do with the airframe life of the Army aviation assets in the theater that we are working in now, primarily Iraq and other parts of the Middle East.

Ms. Kaptur actually alluded to this issue, and you briefly touched on it. But I think in that statement you made some reference to the fact of the diminished airframe life of the aviation as-

sets and what that may mean for us in the future. Can you expound on that?

General THOMPSON. Well, from a general sense, the reference in the statement, for the record, is about the Apache airframe life, 10,000 hours. As we bring an aircraft back to reset it or to do a more significant upgrade, we are always looking at how many hours are left on that airframe. Then we make a decision to take that airframe down and either completely replace the airframe or to do all of the structural modifications necessary, so when we put that aircraft back together again, it can fly for another 10,000 hours. We do that on all of our platforms.

The one we are looking at in particular is the opportunity with the Apache Block III upgrade, which of those airframes do we need within zero time, if you will, so that we get the full operational life back, because it is very expensive to take an aircraft apart, as you can imagine, and put it back together again. When you do that, you want to do it in the smartest way possible.

Mr. BOYD. But the point here is that it is operating in the Middle East theater that is much tougher than, say, Southeast Asia, for example, and would diminish the life of that airframe?

General CROSBY. What we have found thus far, sir, is that the environment of the dust and the sand, it does indeed wear on your components; primarily your drive train components, your rotor blades, your transmissions. All of those rotating components. It is like a sand blaster. We have minimized that through particle separators and we have adapted to those things as best we can. So the wear is primarily on the dynamic components more than the airframe.

The concern I have as the airframe guy is looking at that life. We are their own condition aircraft. They are based on how well and in what kind of environment, how much weight you put on them. If you fly a Chinook at 50,000 pounds all the time, it is obviously going to wear out faster than the one that flew at 30,000 pounds for most of its life. So we have to plan for that.

My concerns are we are flying at that OPTEMPO four or five times the normal rate. Are we using them up faster? We are minimizing that through the reset program through the funding we have been getting to do D-to-D recaps, as we call recapitalization of the airframe, that General Thompson alluded to, down at our depots. We are minimizing that.

But the continued use of those aircraft, yes, sir, it is burning them up faster, and we are spending a lot of time being proactive trying to manage the life limits on that aircraft.

Mr. BOYD. So the airframe issue has more to do with the OPTEMPO than the environment is what I heard you say?

General CROSBY. Yes. Yes, sir.

General THOMPSON. That is a fair take-away point.

ARMED RECONNAISSANCE HELICOPTER

Mr. BOYD. The last question I have has to do with ARH. And can you, General Thompson, give us—or one of you give us a general overview of what happened and what we might be doing to mitigate that situation in terms of assets?

General THOMPSON. The ARH program, there was a Nunn-McCurdy process that we went through and the Defense Acquisition Executive decided not to recertify that program. It was driven in large measure because of a 42 percent increase in the expected cost of that helicopter over what we had put into the acquisition baseline at the time.

We have got the existing Kiowa Warrior fleet out there today. What the Army has done is gone back and reevaluated the requirements—and we submit the 2010 budget and we have talked to that Committee and to the other committees and the staffers on the Hill—is to reinvest the money into making the Kiowa Warrior fleet safe and flyable for the near term because we need to do that.

We have got 338 of those aircraft today that we are going to continue to be flying. A lot of those are in theater as well as probably the most used from a standpoint of density of aircraft in the theater. We have got to continue to maintain the Kiowa aircraft fleet. We will reinvest some money to do that with the support of the Committee. Then we will go through as we update the requirement, and the plan would be to look at a competitive procurement for replacement one day for the Kiowa Warrior fleet. But in the meantime, I think you will see us come back and lay out what we need to do to maintain the fleet that is out there today.

That is not dissimilar to what we have done and when we canceled the Comanche and we talk about reinvesting those dollars. The Chinooks, the Blackhawks, the Apaches, even though these airframes were first produced, in many cases many years ago, it is the recapitalization programs and the upgrade programs that we put them through, these are safe and flyable aircraft. And we will do the same thing for the Kiowa fleet until we eventually replace it.

Mr. BOYD. Yes, Mr. Frelinghuysen.

KIOWA WARRIOR UPGRADES

Mr. FRELINGHUYSEN. If the Chairman will yield, where do we stand relative to the upgrades?

General THOMPSON. On which aircraft, the Kiowa?

Mr. FRELINGHUYSEN. The Kiowa.

General THOMPSON. We have 52 or 54 aircraft left to go that need to be brought to the system enhancement package capability, and then the entire fleet. Then what we are looking at right now is what else do we need to do to extend the service life of those aircraft? We have labeled the program 2020 to get those aircraft to 2020 and beyond. We do that to the entire fleet. We have looked at the necessary enhancements that we need to do to that fleet from the standpoint of avionics, the sensor package, any structural modifications that we need to do.

Mr. FRELINGHUYSEN. So we are making some progress?

General THOMPSON. Yes, sir. We are. We definitely are. We have got all of the planning done to be able to execute that program.

Mr. FRELINGHUYSEN. And when we get them back online with all the avionics and things that we need to upgrade them, how long do you anticipate they will be able to fly? Which gets to, obviously, the bigger issue the Chairman raises which is, if we didn't go

ahead with the other contract, what is there in the future that might replace them?

General CROSBY. Sir—as General Thompson said, we are calling this—Life Support 2020. And those are just a—for lack of a better term—a bucket of mods that we need to do to address obsolescence and those immediate things that we have, I would say, accepted risk on while we were focussing on the ARH. Now that the ARH has been delayed, or the pursuance of that ARH capability has been delayed, as we relook it there are things that need to be done and we have put those into this bucket of Life Support 2020. We start now and we would apply all of them and finish the entire fleet of all of those mods by fiscal year 2015. But, please, that is not a service life extension program.

Mr. FRELINGHUYSEN. How long, to answer my question, will they be able to fly with all those upgrades? That sort of begs the question as to what we are looking at in terms of—towards a replacement.

General CROSBY. I understand. We believe that will carry us through the 2020 time frame, dealing with the obsolescence. In the meantime, the Army at that time, to determine the scope of what we do, either buying a new capability or continuing to upgrade this capability, they will do the analysis to determine what scope has to be done. These are the things we said needed to immediately be done to carry us through that 2020 time frame.

General THOMPSON. I think the way I would describe it, Congressman Frelinghuysen, is we think we understand what we need to do to keep those aircraft safe and flyable until 2020. At that point in time, we need to begin to replace the Kiowa aircraft, or you would have to do a more significant upgrade if you did not replace it with a new aircraft. That decision point is not yet there. That is part of the requirements process.

So we think we have got it scoped out, of what we need to do to keep them until 2020. Then beyond that, it is either buy new or upgrade the existing fleet beyond what we have already scoped out.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

Mr. BOYD. Thank you. On that note, General, can you tell us how many OH-58s you are short?

General DAVIS. Sir, we have a 368 aircraft requirement and we are short 30. So we have 338 right now. So we do have a strategy as well that is pending the final piece of the funding for conversion of OH-58 A's to C's—AC's to D's in order to get us back to our requirement.

Mr. BOYD. Okay.

General THOMPSON. The Alpha and Charlie OH-58 aircraft are the older versions, and there are still some left, primarily in the National Guard. There is roughly 120 or so of those aircraft. So to get from where we are with the inventory of 338 Kiowas to the desired objective to have 368, which gives you enough to put in all of the formations that fly the Kiowas, we would have to convert roughly 30 of those Alpha and Charlies to the Delta model Kiowa. We have done the engineering analysis, we are beginning to do the engineering analysis to make that happen, and that would be subject to the approval of this committee and the other committees in

the Congress. But that would be the plan that we would bring forward.

Mr. BOYD. Okay, gentlemen. Thank you very much.

General Thompson, General Crosby and General Davis, I very much appreciate your forthcoming testimony and answers to the questions.

And I want to also thank the members for your indulgence and participation. And let me close by thanking our wonderful staff, Paul Terry, for helping us put on a productive hearing. And this Committee hearing is adjourned.

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

UH-60 BLACKHAWK HELICOPTER

Question. The UH-60 Blackhawk is a four-bladed, twin-engine, medium lift utility helicopter. Its missions include: air assault, general support, MEDEVAC, command and control, and special operations. Cruising speed is 152 knots. The Army's total requirement for UH-60s is nearly 2,000 aircraft.

What has been the performance record of the Blackhawk helicopter in Iraq and Afghanistan? What capability shortcomings have been identified in Iraq and Afghanistan?

Answer. The performance of the Blackhawk aircraft in Overseas Contingency Operations (OCO) has been exceptional. As of 15 April, 224 aircraft were deployed in support of Operation Iraqi Freedom (OIF) and another 53 aircraft were in Afghanistan supporting Operation Enduring Freedom (OEF). The Blackhawk is a utility aircraft being used in air assault, general support, command and control, and aeromedical evacuation (MEDEVAC) roles. The UH-60, in its MEDEVAC role has saved countless lives due to its ability to get combat casualties to primary medical facilities within the "golden hour." The UH-60 MEDEVAC has been enhanced with a Forward Looking Infrared Radar (FLIR), hoist system, and modern medical interior to assist in casualty extraction and treatment.

Since February 2003, over 757,339 combat flight hours have been flown by Blackhawks in Iraq. 121,346 combat flight hours have been flown in Afghanistan. The operational tempo in both areas is about three times the operational tempo of peace time units or approximately 50 hours/month. While the operational tempo has been high, UH-60 mission capability rates regularly exceed 80-85% on average. However, we should not lose sight of some of the reasons why we are seeing these successes, and how quickly it can change based on funding.

Supplemental funding provides critical enablers to support this high operational tempo and the required readiness to meet missions. Some of these enablers include:

- Higher Repair parts stockage levels, visibility over requirements, and express shipments preclude deployed aircraft being down for part (NMCS) for any length of time.
- Extensive Mission Equipment Packages (MEP) required by HQDA are installed on deploying aircraft to provide enhanced aircraft/aircrew survivability in combat operations, improved communications and situational awareness, and improved aircraft performance. MEPs also help negate the detrimental effects on aircraft and components from operations in the harsh desert environment.
- Substantial contractor support in theater provides 24 hr scheduled/unscheduled maintenance support to units.
- Additional aircraft modifications such as Sponson mounted Forward Looking Infrared (FLIR) for MEDEVAC and Satellite Communications, are installed to meet commanders Operational Needs Statements (ONS).
- Installation of Digital Source Collectors to monitor and provide real-time information on the health and condition of aircraft systems to support the Conditioned Based Maintenance (CBM) concept.
- Aviation Reset's extensive Special Technical Inspection and Repair (STIR) program provides fully mission capable aircraft back to deployed units in the shortest time possible.

The UH-60 Blackhawk is performing exceptionally well in OEF and OIF. Specific shortcomings due to special mission requirement are addressed through the Operational Needs Statement (ONS) process.

Question. Do any units in the Army, active or reserve component, have older model Blackhawks that are considered non-deployable for combat?

Answer. No. But this is dependent on where the aircraft are deploying to. If the aircraft are deploying to Operation Iraqi Freedom or Operation Enduring Freedom there is a prescribed mission equipment list these aircraft must have installed before deployment; we call this program PRESET. There is a number of aircraft within the UH-60 fleet that have not been deployed to combat operations in this theater and we would not deploy until PRESET was performed on the aircraft. But, these aircraft are deployable to other contingencies and deployability would be evaluated based on the mission equipment list for the deployment.

LIGHT UTILITY HELICOPTER (LUH)

Question. The Army is procuring 322 commercial, off-the-self light utility helicopters to replace aging OH-58 and UH-1 utility helicopters. The new aircraft has been designated the UH-72A Lakota. The Army National Guard will receive 200 of the aircraft out of the total of 322.

What are the different models or configurations of the Light Utility Helicopter?

Answer. There are two basic configurations of the UH-72A Lakota. There is a utility version that can carry two pilots, one crewman, and five passengers. There is also a Medical Evacuation (MEDEVAC) configuration that has two pilots, three crew seats and room for two NATO standard litters. The MEDEVAC configuration also has a hoist A VIP transport configuration has also been introduced that has six club seats and may carry two pilots, one crewman and five passengers. There are various configurations being introduced for the Combat Training Center (CTC) and Army National Guard (ARNG) missions. The CTC will be equipped with the necessary equipment to conduct Opposing Force (OPFOR) and Controller missions, such as additional radios, sensors and datalink capability. The ARNG Security and Support (S&S) will have an electro optical sensor, situational awareness equipment and a searchlight. These aircraft will begin to be either retrofitted or produced in FY10.

Question. How many Light Utility Helicopters have been delivered to the Army?

Answer. 63 UH-72A aircraft have been delivered as of 24 April, 2009. 30 have been fielded to the Active Army and 32 to the Army National Guard (ARNG). The remaining aircraft will be fielded to the ARNG the first week of May 2009. Four more aircraft will be delivered by May 1, 2009.

Question. Where and to which units have the helicopters been delivered? What are the missions?

Answer. The Active Army has received 30 UH-72A deployed as follows:

- National Training Center, FT Irwin, CA:
 - 6 UH-72A for MEDEVAC mission.
 - 10 for General Support missions.
- Joint Readiness Training Center, FT Polk, LA: 10 UH-72A for General Support missions.
- Training and Readiness Doctrine Command (TRADOC), FT Eustis, VA: 2 UH-72A for VIP transport missions.
- United States Military Academy (USMA), West Point, NY: 2 UH-72A for general support missions.

The ARNG has received 33 UH-72A deployed as follows:

- Louisiana ARNG: 4 UH-72A at Pineville for S&S Missions.
- Mississippi ARNG: 4 UH-72A at Tupelo for S&S Missions.
- Florida ARNG: 4 UH-72A at Jacksonville for S&S Missions.
- North Carolina ARNG: 4 UH-72A at Morrisville for S&S Missions.
- Texas ARNG:
 - 2 UH-72A at Austin for S&S Missions.
 - 1 UH-72A at Austin for S&S Missions. (to be delivered May 2009)*
- DC ARNG: 6 UH-72A at Ft. Belvoir, VA for MEDEVAC Missions.
- Vermont ARNG: 2 UH-72A at Burlington for MEDEVAC Missions.
- Pennsylvania ARNG: 6 UH-72A at Ft. Indiantown Gap for training missions.

Question. How has the LUH program performed in terms of cost and schedule?

Answer. The LUH program has consistently been on schedule and at cost. In the FY09 budget, the U.S. Army and Department of Defense accelerated the program by increasing production in FY10-14. With the Congressional Add to the program in FY09 of 5 aircraft, a total of 97 aircraft were added in the Program Objective Memorandum (POM) for FY09-14. This will lead to completion of the program with the last fielding in FY15 instead of FY17.

Question. Is the transfer of assembly to the United States required by the contract?

Answer. Increasing U.S. content is a part of the contractor's production duplication plan; however, there are no contractual restrictions on U.S. contents in the con-

tract between EADS-NA and the U.S. Government relative to the LUH. EADS-NA has an internal goal of 65 percent domestic content, which involves continued utilization of existing U.S. suppliers, transfer of assembly/production for some existing non U.S. suppliers to the U.S., and evaluation of potential new suppliers in the U.S. The contractor, EADS-NA has maintained course on their proposed 3-phase, event-driven production duplication plan. The first phase, the Light Assembly Line (LAL) phase, consists of reassembly of a full UH-72A kit in Columbus, MS. This includes installation of rotor blades, tailboom, and landing gear; customization (paint, avionics, and optional equipment); aircraft flight test; and delivery to the U.S. Army. The second phase, the Full Assembly Line phase, consists of assembly of a semi-equipped UH-72A kit in Columbus, MS. In addition to the LAL functions, this phase includes installation of engines, blades, main gear box, tailboom, landing gear, doors, communication/navigation equipment, and seats. The final phase, the Production Line phase, consists of the full build up of UH-72A aircraft in Columbus, MS. To date, 57 aircraft have been produced in the LAL phase, eight have been produced in the Full Assembly Line phase, and two have been produced in the Production Line phase. Production under the first phase will be complete in May 2009, and the second phase now accounts for 80 percent of the aircraft in production. The production will be completely transitioned to the U.S. by the end of 2010.

Question. What is the prescribed readiness rate for the LUH, and what is the reported readiness rate?

Answer. The LUH contract requires an 80 percent Operational Availability for the Active Army units per month. The Army National Guard units perform their own field maintenance and the metric for the contractor is based on parts fill rate. The UH-72A fleet has averaged over 90 percent availability for the life of the program.

AH-64 APACHE HELICOPTER

Question. The Longbow Apache is the Army's current model heavy attack helicopter, capable of armed reconnaissance, close combat, mobile strike, and vertical maneuver in day or night and adverse weather conditions. The Apache is a twin-engine, four-bladed, tandem seat aircraft. The AH-64 Longbow Block III has a 30mm cannon, 2.75 inch rockets, Hellfire missiles and modernized pilot night vision and sensor equipment.

Please explain for the Committee the upgrades and advantages of the latest model AH-64.

Answer. The current Longbow Capabilities Production Document (CPD) states; "ensure Apache will meet the Army's attack helicopter requirements within the Future Modular Force through 2025." Further, the CPD identifies known capability gaps within the current Apache fleet.

Apache Block III is a remanufacture program of the older, less capable, versions of the current Apache Attack Helicopter. The effort will address obsolescence issues, key operations and support drivers, and add capabilities ensuring the aircraft are viable combat multipliers through 2025 within the Army's Future Modular Force. The cornerstone to the Block III program is the remanufacture of older Apaches while integrating technologically current upgrades into a proven weapon system platform. Consequently, Block III is primarily an integration effort and not new technology development. Block III will address current system shortfalls by integrating:

- Unmanned Aircraft System (UAS) Control Capability
- Improved Situational Awareness Capabilities
- Upgraded Communications Suite (obsolescence)
- Improved Drive and Propulsion Systems (operations and support)
- Improved Targeting Capabilities (obsolescence)
- Increased Computer Processing Capability and Speed (obsolescence)
- Improved Navigation System (obsolescence)
- Integrated System Diagnostics Improving Overall
- Maintainability (operations and support)

Question. What is the current inventory of Apaches, how many have been lost in combat operations, how many replacements have been funded and how many of the replacements have been delivered?

Answer. The current Apache fleet inventory is 699. There are 154 AH-64 As and 545 AH-64Ds. There have been 51 operational losses (20 A models and 31 D models.) All 51 operational losses are funded, with 23 deliveries to date. Deliveries for remaining 28 aircraft are scheduled through fiscal year 2011.

Question. Some early models of the AH-64, all fielded in Army National Guard units, are considered non-deployable. Why is that?

Answer. The Army made the decision in 2006 that the Army would no longer deploy AH-64A Apache helicopters to OEF/OIF. This policy is based on the increased sophistication of the threat in the contemporary operating environment and the resultant survivability equipment required, as well as the need for increased detection and targeting capability that the AH-64A does not possess.

Deployment of AH-64A battalions will require mission equipment package and performance enhancements to address the shortcomings that led to their restriction. The resultant AH-64A+ would be equipped with the Modernized Target Acquisition and Designation Sight (MTADS), Common Mission Warning System (CMWS), Aircraft Survivability Product Improvement (ASPI), and 701D engines. The AH-64 Program Manager's most optimistic estimate on the initial operating capability of an A+ battalion is 2nd Qtr FY12 with a trained battalion deploying in FY13. This is slower than current timelines to deploy remanufactured AH-64 Longbow battalions.

The estimated total cost per AH-64A+ battalion is \$158M. This is roughly half the cost of converting an AH-64 battalion to AH-64D but provides less capability and will not fulfill the Army's commitment to modernize the National Guard's Aviation fleet.

Maintaining an AH-64A+ fleet in the Army creates significant training and sustainment challenges and costs. TRADOC no longer qualifies AH-64A aviators in flight school. AH-64A pilots are Longbow qualified at Fort Rucker and then attend the AH-64A "dumb down" course at the Western Army NG Aviation Training Site (WAATS). AH-64A sustainment costs are higher than AH-64D and increase the logistics tails in theater. There is no replacement source for future AH-64A losses.

Question. The Committee understands that the AH-64A aircraft that were considered nondeployable were to have been replaced by the new production Armed Reconnaissance Helicopter; however, the Armed Reconnaissance Helicopter program has been terminated with cost and schedule problems. What is the Army's plan to upgrade the AH-64As in order to make them deployable? Are the upgrades funded?

Answer. The Army Strategy is to upgrade the four remaining AH-64A battalions in the National Guard to AH-64D battalions through a combination of Remanufacture (REMAN) and cascade from the Active Component. This strategy is supportable (POM neutral) through a reprogramming of ARH funding. The Army anticipates completing the modernization of the National Guard AH-64A battalions no later than FY14.

ARMED RECONNAISSANCE HELICOPTER (ARH)

Question. The Armed Reconnaissance Helicopter program was designed to serve as a replacement and capability upgrade to the Vietnam era OH-58 series helicopter. The ARH program had advanced to the production phase in 2008 and 2009. The Army had planned to procure 512 of the aircraft with total program cost of \$5.9 billion. Funding appropriated for Aircraft Procurement, Army for fiscal year 2009 included \$242 million for aircraft production. However, in October 2008 following a Nunn-McCurdy review of cost and schedule breaches, the program was decertified.

The ARH was to be a modified off-the-shelf aircraft. What caused the schedule slip and cost growth?

Answer. The ARH program was originally based on modified commercial off-the-shelf and the integration of non-developmental items. The schedule slip is mainly attributed to two areas:

1. While in the System Development and Demonstration (SDD) phase the time frame to design, integrate, and build prototype aircraft was underestimated and added several months to first flights of each of the four prototype aircraft.

2. Some of the components chosen (i.e. sensor and engine), while based on a fielded variant, had considerable development and testing yet to be done. The engine proved successful and had very little schedule impact on the program. The Bright Star II sensor, on the other hand, had several technical issues that were not easily overcome and in turn became the most critical schedule and cost driver of the program.

Cost growth occurred in both the development and production estimates. The SDD contract cost growth was mainly driven by the issues above and due to the need to resource other activities required in the weapon systems specification and contract statement of work that were underestimated by the prime contractor. The SDD cost growth and contract/technical issues were accounted for and resourced in the restructured SDD contract modification accomplished in April 2008.

The Nunn-McCurdy "critical" unit cost breach included SDD cost increases but was primarily driven by significant increases to the production cost estimates which came to light with preliminary contractor estimates for the first 10 Low Rate Initial

Production (LRIP) aircraft. Production estimate increases were due to significant increases to labor hour estimates, labor rates, and airframe material estimates.

Question. What is the current status of the ARH program?

Answer. To support the potential procurement effort, the Army is conducting a bottom up review of the Armed Reconnaissance Capability requirements to include a thorough assessment of the specific requirements identified for the previous Armed Reconnaissance Helicopter program as well as initiating a formal analysis of alternatives. The analysis will cover the entire spectrum of options, from the potential use of Unmanned Aerial Vehicles, the use of a Manned/Unmanned aircraft mix, to the procurement of a new manned platform. Army and DoD remain committed to the requirement for a manned armed reconnaissance helicopter capability to replace the aging Kiowa Warrior and the need to deliver the capability to our Soldiers in a responsible and timely manner.

Question. Does the Army still have a valid requirement for a new, modern armed reconnaissance helicopter?

Answer. The Army has an enduring Joint Requirements Oversight Council (JROC) approved requirement for a light, manned, armed reconnaissance helicopter. The termination of the ARH program (due to cost overruns) as a result of the Nunn-McCurdy process did not in any way decrease the Army's continuing need for an armed scout helicopter. The Army is initiating an analysis of alternatives to determine the best way to meet the armed scout requirement including a detailed analysis of manned-unmanned teaming.

JOINT CARGO AIRCRAFT (JAC)

Question. The Joint Cargo Aircraft (or C-27J) is a medium sized, multi-purpose cargo aircraft that supports a full range of sustainment missions. It is planned for purchase by both the Army and Air Force. In the Army it replaces multiple older platform including the C-12 and C-23. The C27-J is produced by Alenia Aeronautical and L-3 Communications.

Why does the Army need its own fleet of fixed wing aircraft as opposed to requesting Air Force support?

Answer. Direct Support fixed wing airlift assets give the tactical commander assets he can plan on with certainty. All the Services recognize this need and currently have some internal aircraft capability for Direct Support fixed wing airlift. The cost to the warfighter of not having fixed wing aircraft in Direct Support would be the loss of control for the tactical commander to meet the immediate requirements of the ever-changing battlefield. Tactical commanders would lose flexibility to meet their unit's needs in fluid situations. Enemy actions, weather and terrain can quickly change the situation. The Air Force is structured and employed to support efficient bulk transport of supplies and personnel. Air Force intra-theater airlift in General Support enables the push of bulk supplies and personnel across the battlefield. Centralized control of General Support assets allows the JFC to weigh his priorities across the Joint Operating Area. Fixed wing aircraft in Direct Support of Army forces provide the tactical commander the required flexibility to meet his unit's immediate needs in dynamic situations, thus enhancing the commander's freedom to maneuver advantageously against the enemy.

Question. The Committee understands that Alenia and L-3 may team with Boeing for final assembly operations in the U.S. What is the status of the teaming agreement and what will be the impact on aircraft production if a teaming arrangement is not reached?

Answer. L-3 and Boeing have not entered into a teaming arrangement and continued efforts to establish a teaming arrangement do not exist to our knowledge. No aircraft production issues exist due to the lack of a teaming arrangement. Alenia is continuing the planning for a U.S. based final assembly operation.

Question. Is the program on track for full rate production?

Answer. Yes, the program's parameters of cost, schedule, and performance are on track to support a Full Rate Production decision planned in Calendar Year 2010.

JOINT FUTURE THEATER LIFT/JOINT HEAVY LIFT

Question. The Committee understands that the Joint Vertical Lift Task Force is developing requirements to meet Army and Navy/Marine Corps needs for a heavy lift transport rotorcraft. Concurrently the Air Force and Army are studying Joint Future Theater Lift which may be a heavy lift rotor craft to enable vertical maneuver.

The Army and Navy are collaborating in the Joint Vertical Aircraft Task Force; and the Air Force and Army are proceeding with the joint Future Theater Lift Pro-

gram. This sounds like a duplication of effort. What is the status of these two Joint Heavy Lift programs?

Answer. The Joint Vertical Aircraft Task Force (JVATF) is an Office of the Secretary of Defense sponsored task force that was a follow-on to the Non-Fixed Wing Aviation study. The JVATF has been dormant for more than a year but had a goal of developing a systems roadmap for the Department of Defense (DoD) vertical aircraft fleet. That activity has been overcome by the ongoing DoD Future Vertical Lift (FVL) activity that was initiated by the Secretary of Defense in response to a specific congressional request. The FVL, and the JVATF before it, is addressing the complete spectrum of vertical lift systems. 'Heavy' is just one aspect of their interest area. FVL is a strategic planning activity to define a future systems roadmap. Individual systems will be identified in the resulting plan, but each system will then have to proceed with developing its own requirement and program of record through the normal Joint Capabilities Integration and Development System (JCIDS) and the Planning, Programming, Budgeting, and Execution System process.

The Joint Future Theater Lift (JFTL) is a joint activity of all the services and SOCOM, not just the Army and Air Force. JFTL is a specific joint requirement description in the JCIDS process for a heavy lift transport that will support mounted vertical maneuver of medium weight forces, sustainment to the point of need, and theater distribution. The Initial Capabilities Document (ICD) is in joint staffing now and will be reviewed/approved by the Joint Requirements Oversight Council (JROC) in June/July 2009.

Question. Is the Joint Heavy Lift program still joint, or are Army, Air Force and Navy/Marine Corps all going in separate directions?

Answer. Joint Heavy Lift (JHL), which is an Office of the Secretary of Defense, Acquisition, Technology & Logistics (OSD (AT&L)) directed Joint Concept Refinement activity, has merged its requirement set into the broader Joint Future Theater Lift (JFTL) Initial Capabilities Document (ICD). JHL now represents the Vertical Take Off and Landing (VTOL) candidate for filling the JFTL requirement. JHL is still fully joint, with representatives from the Army, Navy/Marines, Air Force, Special Operations Command, Defense Advanced Research Projects Agency, Office of the Secretary of Defense, and National Aeronautics and Space Administration actively contributing to the aircraft designs and technology investigations.

Question. Will the Joint Heavy Lift aircraft replace the CH-47 Chinook series of aircraft?

Answer. The Joint Future Theater Lift (JFTL) requirement represents mission sets that more closely encompass those of the current C-130 aircraft than of any existing rotorcraft. JFTL is broadly viewed within the Department of Defense as the eventual replacement for the C-130 aircraft. Joint Heavy Lift (JHL), as the Vertical Take Off and Landing (VTOL) candidate for the JFTL, is significantly larger than either the CH-47 or CH-53K helicopters and is intended to operate over dramatically longer range and with twice the payload of existing rotorcraft systems. If JHL is fully developed and procured, there will be an assessment of how it will influence the entire lift fleet mix. There is the probability that it will affect the number of smaller rotorcraft lift systems needed, but it does not replicate or replace the mission sets of either the CH-47 nor CH-53 tactical rotorcraft.

Question. What unique airlift capability will the JHL program provide for the Army?

Answer. The complete Capabilities Based Assessment conducted during the JHL Concept Refinement activity, concluded that there are six high risk capability gaps that could only be fully satisfied with a Vertical Take Off and Landing (VTOL) capability. JHL, if chosen to fill the JFTL requirement, will provide the capability to maneuver by air, medium weight and lighter mounted as well as dismounted forces and to sustain those forces as they maneuver on the ground. This is a fundamentally new and significantly greater force capability than the U.S. has ever had. The exact payload weights and ranges will be determined during completion of the Capabilities Development Document but the Initial Capabilities Document identifies combinations of payload weights from 20 to 36 tons and ranges from 250nm to over a 1000nm, depending upon environmental and takeoff and landing conditions. JHL's VTOL capability provides the potential to operate to and from future sea based platforms, offering greater force projection and sustainment opportunities in access denied environments.

Question. Will the JHL program provide a theater airlift capability for the Army's Future Combat Systems?

Answer. Yes. The JFTL Initial Capabilities Document contains the requirement to maneuver medium weight forces. Designs for JHL, the Vertical Take Off and Landing candidate for JFTL, have accounted for the dimensions and maneuver weights of existing and developing medium weight forces, including the Future

Combat Systems (FCS) family of vehicles. JHL cargo bay designs accommodate the Stryker, Mine Resistant Ambush Protected Category I/II, FCS, U.S. Marine Corps Service Life Extension Program Light Armored Vehicle, two International Organization for Standardization containers, seven 463L pallets, and a plethora of other vehicle and cargo loads.

SKY WARRIOR UNMANNED AIRCRAFT SYSTEM (UAS)

Question. Warrior Unmanned Aerial Vehicles are serving in an ever expanding role in U.S. Army combat operations. Requests for support regularly exceed assets available. Warrior aircraft provide reconnaissance, target designation and direct attack capabilities. The Sky Warrior is a follow on to the Predator/Warrior Alpha.

How many Warrior/Sky Warrior UAVs are deployed in Iraq and in Afghanistan?
 Answer. Iraq has three Warrior Alpha systems (eight Aircraft each) and one Warrior Block 0 System (two Aircraft). Afghanistan has one Warrior Alpha system (three Aircraft).

Question. How many have been destroyed in combat operations and how?

Answer. Two Warrior Alpha UAS aircraft were destroyed in Afghanistan. One aircraft was lost due to unknown causes and one was lost after losing the beyond line of site link and impacted a mountain at a very high altitude. One ERMP Block 0 aircraft in Iraq crashed and was destroyed due to contractor operator error. None of these losses were associated with takeoff/landing or enemy activity.

Question. Are the Unmanned Aerial Vehicle operators based in the war Theaters, or are they located in the U.S.? Does the Warrior/Sky Warrior have an automatic take off and landing capability?

Answer. All operators are located in theater. Warrior Block 1, Extended Range Multi-Purpose has an Automatic Takeoff and Landing System. Warrior A and Warrior Block 0 have air vehicle operators that perform takeoff and landing operations.

Question. The Army is in the process of surging a Quick Reaction Capability of Sky Warrior Block I UASs to the war zones.

a. Please explain for the Committee what equipment comprises the Quick Reaction Capability and the time line for providing the additional capability in theater.

b. What are the improvements found in the Block I version of the Sky Warrior?

Answer. The Quick Reaction Capability (QRC) consists of two Platoons of equipment, one deploying this summer and the second deploying next summer. Each platoon will include four Aircraft, two Army One System Ground Control Stations, 17 Soldiers and civilian contractors for logistics support and operational augmentation. The QRC Block 1 aircraft will have the Automatic Take Off and Landing System (ATLS), but as a risk mitigation to this new system and the Army will also deploy a proprietary General Atomics shelter that can be used by contractor personnel to manually land the aircraft in the event of an ATLS failure.

The Block I version has significant improvements over the Warrior Alpha. We move from a proprietary Ground Control Station and command link to the Army One System Ground Control Station and add an Automatic Take Off and Landing System to reduce the training requirements. The Block I is a larger aircraft with redundant flight controls, a heavy fuel engine, longer endurance, the Starlite Radar, communications relay and the ability to carry four Hellfire missiles.

Question. Is Sky Warrior compatible with Army Future Combat Systems (FCS)?

Answer. The Extended Range Multi-Purpose will be compatible with FCS; however specific inter-relationships and compatibility will be further examined in the 2012–2017 Program Objective Memorandum period.

SHADOW UNMANNED AERIAL SYSTEM (UAS)

Question. The Shadow UAS provides reconnaissance, target acquisition and force protection for the Army Brigade Combat Team. A Shadow System consists of four aircraft; two ground control stations and various support trucks. Shadow platoons are found at Army brigade level. Shadow has a range of 125 kilometers based on line of sight communications and endurance of six hours.

What is the inventory objective and on hand status for Shadow systems?

Answer. The Army Procurement Objective is 102 systems. 63 systems are fielded, each with four Air Vehicles.

Question. How many Shadow aircraft have been lost in Iraq and what is the current shortage?

Answer. 112 air vehicles have been lost, listed as Beyond Economic Recovery during Overseas Contingency Operations. None confirmed as combat loss, but characterized as accidents (either material failure or human error). There have been additional incidents, but the Air Vehicles (AVs) were able to be repaired, either on site or at the depot in Hunt Valley, MD, and returned back to service. Funding is pro-

vided for three replacement AVs per year. Shortages do not exist; adequate replacements are on-hand at the Forward Repair Activity located at LSA Anaconda, Iraq.

Question. Will data from Shadow be compatible with Army Future Combat Systems (FCS)?

Answer. Shadow will not be part of the System of Systems Common Operating Environment or Battle Command System enabled on the air vehicle because of Size, Weight and Power constraints. However, the Universal Ground Control Station will be interoperable with FCS. Joint Tactical Radio System is an objective capability.

Question. Are Shadow systems equally suitable for operations in Iraq and Afghanistan?

Answer. The terrain in Iraq has fewer mountains and less severe winter weather conditions than Afghanistan. All aviation operations in Afghanistan are impacted by the terrain, high altitudes and winter weather conditions. The high mountains restrict Line of Sight control and create wind and visibility conditions that impact all operations. However, the Shadow UAS is capable of operation in the vast majority of the areas in Afghanistan where operations are conducted.

RAVEN UNMANNED AERIAL SYSTEM (UAS)

Question. The Raven Unmanned Aerial System is man-packed and hand-launched. It weighs about four pounds and has flight endurance of 80 minutes. A Raven System has three aircraft, a ground station day and night cameras and a laser designator.

Does the Raven provide both still pictures and video?

Answer. Yes, in addition to display of live mission video, the Raven (RQ-11B) captures both still frame pictures and video. The still frame images are captured in the National Imagery Transmission Format (NITF) standard. The images are initially stored on the Raven system hub and may be downloaded to the Raven's associated laptop computer as either NITF or JPEG images. Still images stored on the hub may be viewed on the Raven hand controller. Video is captured and stored in real time on the Raven's laptop in MPEG 2 format. Telemetry from the flight is embedded in the video and may be extracted during video playback on the laptop using Raven's AV Screener software. The Raven system laptop is currently a Panasonic CF-19 Toughbook. U.S. Government Falcon View software with additional software applications related to Raven provides the interface and functionality for imagery archiving and playback on the system laptop computer.

Question. Ravens operate at low altitudes, literally right in the ground fight. Are Ravens often shot down?

Answer. No. There is anecdotal evidence of insurgents engaging Ravens with small arms fire, but no verifiable incidents of successful shoot downs.

Question. Can radio frequency clutter cause control of the Raven to be lost? Then what happens?

Answer. Yes, electromagnetic interference from sources operating in frequency ranges near the Raven uplink frequency or at high power levels may interfere with the Raven data link. If the uplink frequency from the Raven ground control station to the aircraft is interrupted for a duration of three continuous seconds, one of three actions will occur: the aircraft will enter a Rally mode and land at a preselected landing point, finish the programmed flight and proceed to a preselected landing point, or may land immediately. Any one of the three options may be selected by the operator during mission planning. Loss of the video and telemetry downlink is independent of the uplink loss and does not prompt loss of link procedure. Strict frequency management procedures and mission planning will reduce the potential for loss of link. A "lock-on" process was added to Full-Rate Production systems in 2007 that links a specific ground station to a specific aircraft to preclude inadvertent interference from other ground stations near the aircraft. The Raven system will undergo product enhancement beginning in Fiscal Year 2009 to convert to a digital data link.

Question. How well does the Raven perform in windy conditions?

Answer. Raven technical manuals specify that the system should normally operate in wind conditions of 20 knots (23 miles per hour) or less. The Raven aircraft can cruise at 26 knots (30 miles per hour) and dash at speeds up to 45.7 knots (52.6 miles per hour). Operators will assess the wind conditions during mission planning and, in coordination with commanders, compare the mission priorities to the risks. The flight duration of the aircraft will limit operational ranges in windy conditions. Winds will impact either the flight to the objective or the return leg. Additional power may be consumed when flying against strong winds. Wind conditions will have an impact on the ability to maintain stable imagery on a specific target. Elec-

tronic Pan, Tilt and Zoom was integrated in 2006 and greatly enhanced the stability of the imagery in windy conditions.

Question. How many Ravens have been lost in combat operations?

Answer. There has only been one reported loss of a Raven aircraft due to hostile fire, having been directly observed by friendly forces. Other aircraft have been lost due to fly-aways in which the aircraft did not return to the recovery site. Determination of the reason for any uncommanded fly-away, or other loss in which the aircraft was not recovered, is not technically possible. Since the beginning of combat operations, 110 Raven aircraft have been reported lost and unrecovered in Operation Iraqi Freedom and none have been reported lost in Operation Enduring Freedom.

Question. What is the basis of issue for Raven UAS?

Answer. Raven systems are currently authorized in both active and reserve component units. The Army Acquisition Objective is 2,182 Systems and the Army Procurement Objective is resource constrained to 2,096 Systems. The bulk of Raven systems are fielded to Brigade Combat Teams. Heavy Brigade Combat Teams and Infantry Brigade Combat Teams are each authorized 15 Raven systems. Stryker Brigade Combat Teams are authorized 17 Raven systems. The current U.S. Army Basis of Issue Plan was approved May 18, 2008. The plan approves fielding to Brigade Combat Teams, Battlefield Surveillance Brigades (4 each), Fires Brigades (7 each), Pathfinder Companies in Combat Aviation Brigades (4 each), Engineer Sapper Companies in Maneuver Enhancement Brigades (3 each), Military Police Companies in Maneuver Enhancement Brigades (2 each), and Sustainment Brigades (1 each). Additionally, within Special Forces units, Ravens are authorized in Ranger Battalions (4 each), Ranger Regiment Special Troops Battalion (4 each), Special Forces Groups (2 each), Special Forces Battalions (2 each), and Special Forces Companies (2 each). Training assets are authorized at the US Army Infantry Center and School (17 systems), the Special Warfare Center and School (18 systems), and the US Army Armor Center and School (4 systems).

Question. Is the Raven system equally useful in Iraq and Afghanistan?

Answer. Yes. The original Raven fielding was to Operation Enduring Freedom in 2003 with the early version known as Raven A. If operations will be at a sustained high altitude, an alternate propeller is available to enhance performance at those altitudes.

FUTURE COMBAT SYSTEMS CLASS I UNMANNED AERIAL SYSTEM

Question. The Future Combat Systems Class I Unmanned Aerial System is also known as the Micro Air Vehicle, or Maverick. The Maverick provides a network capable situational awareness capability down to platoon level. It has the ability to hover and stare at military operations on rural and urban terrain. The vehicle weighs about 41 pounds and has vertical take-off and landing capability.

What has been the feedback from Soldiers who have used the Class I UAS, either in training or in combat?

Answer. Soldiers are positive about the capabilities of the Class I UAS because it has provided a very effective capability to the platoon and company levels to perform reconnaissance and surveillance missions in environments (such as urban and complex terrain) that are not conducive to larger UAS platforms. The Class I UAS provides unique capabilities to the small unit in current operations. Positive feedback has also been provided on how easy the Class I Block 0 is to assemble, deploy for flight, and maintain.

Soldiers say, “. . . provides significant military utility to the lowest echelon, . . . very easy to operate, . . . operating in conjunction with the Stryker the gMAV significantly contributed to maintaining persistent surveillance, . . . the IR Sensor pinpointed the enemy even after the sun went down. We could have really used this in Iraq, . . . the UAV helped us identify a breach during the exercise, . . . if this had been a real combat situation, it would have saved lives, . . . gMAV would have saved lives in Iraq because we could have seen over walls. It would have protected our resupply squad, . . . the Class I increases efficiency and decreases risk.”

Lessons learned from operational and experimental assessments are being used today in the acceleration of the Class I Block 0 UAS to the Army Evaluation Task Force and also in the development of the Class I UAS threshold platform.

Question. What near-term improvements are planned for the Class I UAS based on test flights and Soldier feedback?

Answer. Each generation of the basic system has improved capabilities that make it distinct from the previous generation. The Future Combat Systems (FCS) Class I Block 0 UAS is based on the gasoline Micro Air Vehicle (gMAV) platform, which

originated as a Defense Advanced Research Projects Agency Advanced Concept Technology Demonstration in 2002.

For the Class I Block 0 platform (part of the FCS Spin-Out Early Infantry Brigade Combat Team), there are several improvements planned as a result of the FCS Preliminary Limited User Test in fiscal year 2008 (FY08). These include a gimballed Electro-Optical (EO) Sensor, a gimballed Infrared (IR) Sensor, an electric fueler, an improved Operator Control Unit, an improved Engine Control Unit, addition of Digital and Command and Control video, and addition of Direct Data Link integration (in 2010).

For the Class I Threshold platform scheduled for FY13, these are the planned improvements. A 10 Horsepower (hp) heavy fuel engine, a combined EO/IR/Laser Designator/Laser Range Finder payload, integration of the Small Form Factor-D and Soldier Radio Waveform 1.1 c, addition of Radio Crypto Keying, an electric fueler, and an electric starter.

FUTURE COMBAT SYSTEMS CLASS IV UNMANNED AERIAL SYSTEM

Question. The FCS Class IV UAV or Fire Scout, is a small unmanned helicopter that provides brigade level reconnaissance, surveillance, and target acquisition; target designation; communications relay; Nuclear detection; mine detection; signals intelligence and persistent stare.

How many Fire Scouts does the Army plan to buy and how many has the Army taken delivery of so far?

Answer. A total of 504 air vehicles are planned to meet current Army requirements for fielding, training, and spares. The Army has purchased eight airframes, through the Navy Vertical Take-off and Landing Unmanned Aerial Vehicle Firescout contract, for System Development.

Question. What is the Army doing with the Fire Scouts that have been delivered? Are any of the Army's Fire Scouts in use in Iraq or Afghanistan?

Answer. Eight prototype Class IV UAS are on contract to support Integrated Qualification Tests and Limited User Tests beginning with first flight in April 2011. To date, none of the eight prototypes have been fully assembled because key subsystems needed to make the aircraft flyable are still in development and have yet to be delivered for integration. Seven of eight airframes have completed Phase I assembly with airframe #8 due to complete in May 2009. Phase II integration (installation of unique mission equipment, payloads, and data links) is scheduled to begin with unit A1 in March 2010, as the unique hardware and software are delivered, and conclude in June 2011 with Unit A8.

The Army has not deployed any Class IV Unmanned Aerial System to Iraq or Afghanistan.

Question. Is the Fire Scout capable of assisting in the counter Improvised Explosive Device (IED) effort?

Answer. Once the Class IV UAS has completed the system development effort and passed all testing, it is envisioned that the capabilities offered by the Class IV UAS would assist in detecting some IEDs. The Class IV UAS is capable of supporting a wide variety of modular mission payloads, including Signal Intelligence payloads and optical payloads designed for the counter IED mission. The baseline payload for the Class IV UAS is the Airborne Standoff Minefield Detection System Electro-Optical (EO), Infrared (IR), Laser Designator, and Counter Mine sensor. Though not specifically designed for IED detection, the multi-spectral imager on this sensor provides the ability to detect minefields and other small targets, as well as excellent counter-camouflage capabilities in varied backgrounds, vegetation, and thermal and lighting conditions, which exceeds the capabilities of most other EO/IR sensors.

Question. Will the Fire Scout be part of technology Spin-Out One to infantry units of the Army?

Answer. The Class IV UAS has been approved as part of the Threshold spin-Out fielding beginning in FY 13. The Army continues to work on the specifics of the required capabilities, organizational design, cost, schedule, and performance to meet this proposal.

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

WEDNESDAY, APRIL 1, 2009.

SHIPBUILDING PROGRAMS

WITNESSES

VICE ADMIRAL BERNARD J. McCULLOUGH, DEPUTY CHIEF OF NAVAL OPERATIONS FOR INTEGRATION OF CAPABILITIES AND RESOURCES
ALLISON STILLER, DEPUTY ASSISTANT SECRETARY OF THE NAVY (SHIP PROGRAMS)

OPENING REMARKS OF MR. MURTHA

Mr. MURTHA. The committee will come to order.

Today we will hold an open hearing on the state of the Navy shipbuilding program, which would be nowhere if it weren't for this committee. I mean, 2 years ago, you requested four ships and we ended up with seven or eight. Last year, I don't remember what you requested, but we added at least one. And this year I know you don't know where you are at this point, but if we are going to get to 313, we can't get it to 313—and that is a figure you use—unless we build at least 10 per year. Of course, what you say is, every year, we are going to do it next year; and, next year, you say, we are going to do it next year. So I am looking forward to hearing from you.

We have 283 ships, you said earlier, right now. So we look forward to hearing both you distinguished guests testifying.

And I recognize Mr. Young.

REMARKS OF MR. YOUNG

Mr. YOUNG. Mr. Chairman, thank you very much; and I join you in welcoming the distinguished witnesses this morning.

I don't have a major opening statement other than to say the same thing that the chairman did. I remember the days we were headed for a 600-ship Navy. Obviously, we didn't get there; and the chairman is concerned about how we get to where the Navy wants to be now.

I recognize that the newer ships that we are building are more efficient and you can do more with a ship than you could with the one that was built 50 years ago, but we are here to help maintain a very strong Navy and the ability to protect the United States anywhere in the world that we need to protect.

So thanks for being here. We look forward to your testimony, and don't be bashful. Tell us what your problems are and what your goals are.

Mr. MURTHA. If you will summarize your statements, without objection, we will put your full statements in the record.

Mr. MURTHA. Ms. Secretary.

SUMMARY STATEMENT OF MS. STILLER

Ms. STILLER. Mr. Chairman, Representative Young, and distinguished members of the subcommittee, it is a privilege for Vice Admiral McCullough and I to appear before you today to discuss Navy shipbuilding.

The Department remains committed to achieving an affordable fleet and, during this past year, we have created and implemented a new policy on acquisition governance. This new governance process' requires involvement by senior Navy officials and reviews at specified points throughout a major acquisition program's life cycle. These reviews evaluate program cost drivers, monitor program health, evaluate risk and ensure adequate staffing. As these reviews are accomplished, lessons learned about the governance process as well as systemic program issues, are being addressed.

In an effort to address cost estimates, we have reinvigorated the independent Navy Center for Cost Analysis and established a new, highly focused cost estimating tiger team. In shipbuilding, we are ensuring that new ship designs are adequately mature before entering ship production. With our shipbuilding contracts, we are implementing cost reduction initiatives, affordability programs, reuse of existing designs, and incentives of selected capital improvement projects, otherwise known as Capital Expenditures (CAPEX).

When programs are mature, we are exploring block buys and multiyear procurements. Open architecture both for hardware and software promises to be a powerful cost avoidance tool as well.

The Department recognizes that our in-house acquisition workforce has atrophied during the last decade. During this time, the Department has become increasingly reliant upon contractors to support management and oversight. We have outsourced work better accomplished in house and we are now working to grow that talent within the Navy. Some growth will be funded by reallocating resources from outsourced work.

We have been hiring approximately 400 interns per year and, with a new acquisition workforce development fund established in fiscal year 2009, we will hire an additional hundred interns and 150 journeymen this year.

A year of policy changes and acquisition was paralleled by positive activity in ship acquisition. We commissioned nine ships during 2009 and signed contracts for our future fleet. The Navy awarded a contract for Gerald R. Ford, the lead ship of the CVN-78 class. The ship design is over 80 percent complete and a thorough production readiness review has been conducted.

An eight-ship multiyear procurement contract was signed in December for the continuation of Virginia class builds. The contract achieves the cost reduction goal of \$2 billion per boat in fiscal year 2005 dollars, starting with the 2012 boats.

We also awarded detailed design and construction contracts for DDGs 1000 and 1001. DDG-1000 fabrication commenced in February of this year, with over 85 percent of the design complete prior to the start of construction. LCS-3 was awarded last week and negotiations continue for LCS-4.

The fiscal year 2010 bids are in process as well. A contract for up to 10 Joint High-Speed Vessels was awarded in 2008 and design efforts are ongoing.

The Navy has also awarded the preliminary design work for the Mobile Landing Platform, a key component of the Maritime Preposition Force Future and DDG-51 restart advance procurement is also in process.

The Navy has come through many difficulties associated with lead ships and sustained production is proceeding. We are addressing issues with the acquisition workforce. We have instituted the acquisition governance process to facilitate continual requirements in acquisition communication.

We are committed to meeting the force structure required to meet the maritime strategy. Thank you again for your continued support of Navy shipbuilding.

SUMMARY REMARKS OF ADMIRAL McCULLOUGH

Admiral McCULLOUGH. Thank you, sir.

Mr. Chairman, Representative Young, and distinguished members of the subcommittee, I am honored to appear before you this morning with Ms. Stiller to discuss Navy shipbuilding.

Before I begin, I would like to mention that, in addition to our role in sea power, the Navy currently has about 14,000 Sailors serving on the ground in the CENTCOM area of responsibility, specifically Iraq and Afghanistan. They serve in traditional roles with the Marine Corps, but also in land service combat support and combat service support missions to support the joint commander in the Army. We provide these Sailors, in addition to fulfilling our commitments to the country and our allies, to provide persistent forward presence and incredible combat power in support of the Maritime Strategy.

Today we have a balanced fleet capable of meeting most Combatant Commander demands from persistent presence to counter-piracy, to ballistic missile defense. However, as we look ahead in the balance of capability and capacity, we see emerging warfighting requirements in open ocean Submarine Warfare, Anti-Ship Cruise Missile, and Theater Ballistic Missile Defense.

Gaps in these warfare areas pose risks to our forces. State and nonstate actors who, in the past, have only posed limited threats in the littoral are expanding their reach beyond their shores with improved warfighting capabilities.

A number of countries, who historically have only possessed regional military capabilities, are investing in their Navy to extend their reach and influence as they compete in global markets. Our Navy will need to outpace other navies' capabilities as they extend their reach. The Navy must be able to assure access in underdeveloped theaters. We also have routinely had access to forward staging bases in the past. This may not always be the case in the future.

In order to align our surface combatant and investment strategy to meet the evolving warfighting gaps, the Navy plans to truncate the DDG-1000 program and reopen the DDG-51 production line, as I testified to Congress last summer. This plan best aligns our

surface combatant and investment strategy to meet Navy and combatant and commander warfighting needs.

The reason for the change to the Navy's DDG plan is to prioritize relevant combat capability. Modernizing the Fleet's cruisers and destroyers and executing an affordable shipbuilding plan are crucial to sustaining and constructing a 313-ship Navy with the capacity and capability to meet our country's global maritime needs.

The Navy must have the right capacity to meet combatant and Commander warfighting requirements and remain a global deterrent. Combatant Commanders continue to request more ships and increased presence to expand cooperation with new partners in Africa, the Black Sea, the Baltic region, and the Indian Ocean. This is in addition to the President's requirement to maintain our relationships with current allies and partners. Therefore, the Navy must increase capacity to meet Combatant Commander demands today for ballistic missile defense, theater security cooperation, and steady state security posture, simultaneously developing our fleet to meet future demands.

While the Navy can always be present persistently in areas of our choosing, we lack the capacity to be persistently present globally. This creates a presence deficit, if you will, where we are unable to meet Combatant Commander requirements. Africa Command capacity demands will not mitigate the growing European Command requirement, and Southern Command has consistently required more presence that largely goes unfilled.

The Navy remains committed to procuring 55 Littoral Combat Ships. The LCS program will deliver capabilities to close validated warfighting gaps. LCS inherent speed, agility, shallow draft, payload capacity, and reconfigurable mission spaces provides an ideal platform for conducting additional missions in support of the maritime strategy to include irregular warfare maritime security operations such as counter-piracy operations.

The Navy remains committed to an 11 carrier force for the long term, which is necessary to ensure that we can respond to national crises within the currently prescribed time frames. Our carrier force provides the Nation the unique ability to overcome political and geographic barriers to access for all missions and project power ashore without the need for host nation ports and airfields.

The Ohio class ballistic missile submarine, originally designed for a 30-year service life, will start retiring in 2027 after over 40 years of service life. The Navy commenced an analysis of alternatives in fiscal year 2008 for a replacement ballistic missile submarine. Early research and development will set the stage for the first ship to begin construction in fiscal year 2019.

The Virginia class submarine is a multi-mission platform that fulfills full spectrum requirements. Virginia was designed to dominate the undersea domain in the littorals as well as the open ocean in today's challenging international environment and is replacing our aging 688 class submarines. Now in its tenth year of construction, the Virginia program is demonstrating that this critical capability can be delivered affordably and on time.

The Commandant of the Marine Corps has determined that a minimum of 33 assault echelon amphibious ships is necessary to support their lift requirements. Specifically, he requested a force of

11 aviation-capable ships, 11 LPD 17s, and 11 LSDs. The Chief of Naval Operations supports the Commandant's determination.

The Navy must maintain its carrier, submarine and amphibious force. In addition, we need to increase our surface combatant capacity through increased destroyer procurement and LCS to meet Combatant Commander demands today for missile defense, theater security cooperation and a steady state security posture.

I thank you for this opportunity to discuss the Navy shipbuilding program and your support of our Navy. I look forward to answering your questions.

Thank you very much, Mr. Chairman.

[The joint statement of Admiral McCullough and Ms. Stiller follows:]

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THE HOUSE APPROPRIATIONS COMMITTEE
SUBCOMMITTEE ON DEFENSE

STATEMENT
OF

VICE ADMIRAL BERNARD J. MCCULLOUGH
DEPUTY CHIEF OF NAVAL OPERATIONS
FOR INTEGRATION OF CAPABILITIES AND RESOURCES

AND

MS. ALLISON STILLER
DEPUTY ASSISTANT SECRETARY OF THE NAVY
(SHIP PROGRAMS)

BEFORE THE

SUBCOMMITTEE ON DEFENSE

OF THE

HOUSE APPROPRIATIONS COMMITTEE

ON

SHIPBUILDING

April 1, 2009

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

Mr. Chairman, Representative Young, and distinguished members of the Subcommittee, thank you for the opportunity to appear before you today to address Navy shipbuilding. The Department is committed to the effort to build an affordable fleet tailored to support the National Defense Strategy, the Maritime Strategy, and the 2006 Quadrennial Defense Review. The budget required in FY 2010 for new construction ships will be provided upon the submittal of the FY 2010 President's Budget.

Since the 1800s, the United States Navy has been permanently deployed far from American shores, and our nation's first responder to crisis and upheaval throughout the world. The Navy's continuous presence assures our friends and allies that the United States remains ready to help deter aggression, maintain access to the seas, and assist in the event of humanitarian crisis or natural disaster. Forward presence uniquely provides our country's leadership the ability to act with understanding, speed, and flexibility to contain issues or conflicts before they escalate. The Navy's forward presence has been called upon for more than 75-percent of our nation's combat operations and shows of force, and 90-percent of long duration humanitarian assistance or disaster response missions since 1970. The cost of perpetual presence requires us to continually maintain, upgrade and recapitalize our ships and submarines.

Inherent to the Navy's ability to perform these critical National Security missions are our ships and our ship force structure. Ships define the Navy and underpin virtually all of our naval warfighting capabilities. Today, we have a balanced fleet capable of meeting Combatant Commander demands, from presence to counter-piracy to ballistic missile defense. However, our fleet is stressed due to inadequate force structure and our high operational tempo. As we look ahead, we see emerging warfighting requirements in littoral warfare missions and ballistic missile defense that are not fully addressed within our existing force structure. These factors drive our future force structure requirements for 313 ships, LCS, and DDG 51 restart.

The continual challenge the Navy faces is the availability of resources to fully populate the necessary force structure. As a result, the Navy will assume risk in some capability areas in order to achieve a balance across all of its mission sets. While there will be some areas that have risks, the aggregate force will retain its basic warfighting capability to ensure the Nation does not lose its ability to deter, dissuade and win in armed conflict, while at the same time provide security and stability through Theater Security Cooperation. The Navy is responding to emergent Combatant Commanders' requirements by placing more emphasis on capacity for ballistic missile defense, irregular warfare, and open ocean anti-submarine warfare (ASW). The Navy is readdressing the demands for high speed amphibious and intra-theater lift, and a variety of missions in the littoral with the Joint High Speed Vessels and Littoral Combat Ship.

In the past decade, the average age of the Navy's ships has risen from about 15 to over 20 years old as platforms built in the 1980s approach the end of their service lives. Replacement ships have been delayed, are more expensive, and are fewer in number than planned, shrinking the Fleet from 344 total active ships in 1998 to 283 today. The shipbuilding industrial base has followed suit, downsizing aggressively in response to the Navy's reductions in ship procurement, leaving just two major shipbuilding companies operating across six locations. These individual shipyards are substantially smaller than they were just a decade ago. We are at a minimum sustaining rate for affordable shipbuilding; further reductions in ship procurements will

exacerbate existing shortages, and we risk losing the core talent and industrial tools necessary to build future naval platforms. Mindful of this, Navy force structure planners are increasingly constrained by, and consequently focused on, the ability of the private shipbuilding industry to respond to our production requirements.

The Navy has examined the rising cost of ship acquisition. Per-ship costs are rising due to such factors as reduced competition, build rate volatility, overtime, low rate production, instability in ship class size, and challenges with introducing new technologies into new platforms. All of these factors lead to inefficient ship production. The Department is working aggressively to control costs. We are ensuring that new ship designs are mature enough to commence production; immature designs drive added cost and schedule risk into production. We are working to fully leverage competition at every level of our shipbuilding programs, at the first and second tier vendors if not with prime contractors; lack of competition adds unnecessary costs throughout the shipbuilding supply chain. In addition, within our shipbuilding contracts, we are continuing to implement proven cost-reduction tools and methods like multi-year procurements, cost reduction incentives, affordability programs, re-use of existing designs and equipment, and incentives for selected industrial capital improvement projects (CAPEX). Open Architecture, both for hardware and software, promises to be a powerful cost avoidance tool as well as a process for improving warfighting capability.

In 2008, the Navy instituted a more stringent acquisition governance process which improves reporting, reviewing, and oversight processes that provide specific criteria for areas such as requirements, funding, and technical performance. This process ensures that stakeholders from the resources, requirements, acquisition, and operational communities are apprised of, address, and revisit at defined intervals, issues associated with technical maturity, affordability and program health. In addition to the review process, every major defense acquisition program must conduct an annual Configuration Steering Board, which provides a means to identify further opportunities to reduce costs. In response to issues regarding shortcomings in cost estimating, the Navy has also re-invigorated the existing independent Navy Center for Cost Analysis (NCCA) and established a new, highly-focused Cost Estimating Tiger Team as a result of insights accumulated through our initial experience with the Acquisition Governance Process. The team is investigating the factors that contribute to improved cost estimates and developing plans of action which will then be implemented by the NCCA and the individual Systems Commands cost estimating organizations.

Working with the Office of the Secretary of Defense (Acquisition, Technology, and Logistics), the Department of the Navy (DoN) is taking specific measures to grow its Acquisition Workforce, which will ensure our ability to properly staff and manage programs. These measures include assigning a Principal Civilian Deputy (Senior Executive) to the Assistant Secretary of the Navy (Research, Development and Acquisition) with responsibilities for all DoN Acquisition Workforce; rebalancing the workforce by reversing the over-reliance on contractor-support executing core Navy acquisition functions (e.g., Systems Engineering, Cost Estimating, and Earned Value); more deliberate management of the Program Manager pipeline (experience and training); and leveraging the recent National Defense Authorization Act Sections 219 and 852 to restore capability and capacity in the DoN Acquisition Workforce.

Further, we are working with our international allies to exchange best practices and lessons learned on shipbuilding efforts. A Shipbuilding Quadrilateral forum, comprised of government officials from the United States, United Kingdom, Canada and Australia, meets quarterly to discuss systematic trends that are emerging in shipbuilding programs. This spring, the United States is hosting the forum, which serves as a forum to discuss acquisition matters such as contracting practices and industry trends.

The Navy is procuring capability and modernizing current ships to create our future fleet. A discussion and the status of construction and modernization for the platforms that comprise the Navy's Fleet follow.

Aircraft Carriers

Aircraft carriers are the foundation of our carrier strike groups and ensure dominance of and presence from the sea. There are 11 operational carriers, as required by statute. However, the Navy will be challenged to meet that inventory requirement from FY 2013 until CVN 78 delivers in FY 2015. The Navy is exploring mitigation opportunities for this two year period but must balance the cost to bridge the gap.

CVN 21 Program

GERALD R. FORD (CVN 78), the lead ship of the CVN 78 Class, will replace USS ENTERPRISE (CVN 65). CVN 78 warfighting capability improvements include: 25-percent increase in sortie generation rate; a significant reduction in ship's force, as well as the air wing and embarked staff; nearly three-fold increase in electrical generating capacity; restoration of service life allowances; and enhanced integrated warfare system to pace future threats. These improvements will ensure that CVNs, the centerpiece of the Navy's Carrier Strike Group will continue to lead the Navy throughout their 50-year carrier lives. The detail design and construction contract between the Navy and Northrop Grumman Shipbuilding – Newport News (NGSB-NN) was signed in September 2008. Keel laying is planned for this fall.

CVN 68 Class

GEORGE H.W. BUSH (CVN 77) is the tenth and final Nimitz Class carrier, and is the numerical replacement for USS KITTY HAWK (CV 63). Delivery of CVN 77 maintains the carrier force structure at the statutory requirement level of 11 carriers. She was commissioned in January 2009 and, following delivery this spring, she will enter a Post Shakedown Availability.

CVN 68 Class Refueling Complex Overhaul (RCOH)

The CVN 68 Class RCOH program spans over 40 years in support of the Class. During each RCOH, 35-percent of a carrier's total service life maintenance plan is performed, as well as depot level mid-life recapitalization which extends the service life of the ship to approximately 50 years. Nuclear reactor refueling, warfighting modernization, and ship systems and infrastructure repair will help meet future missions. These combined upgrades support a reduction in operating costs, achieve expected service life, and allow the Nimitz Class to deter projected threats well into the 21st century. This program is critical for the class to achieve its

service life and retain combat relevance. CVN 70 is currently in her RCOH and will complete this summer.

The Submarine Fleet

It is our intent that the Navy's submarine force remain the world's preeminent submarine force. We are aggressively incorporating new and innovative technologies to maintain dominance throughout the maritime battle space. We are promoting the multiple capabilities of submarines and developing tactics to support national objectives through battle space preparation, sea control, supporting the land battle and strategic deterrence. To these goals, the Department has continued a pattern of timely delivery of Virginia Class submarines while ensuring the overhaul of the Ohio Class submarines supports their continued ability throughout their full anticipated lifetime.

Virginia Class

Five Virginia Class submarines have delivered and six more are under construction. In 2008, the Navy commissioned USS NORTH CAROLINA (SSN 777) in May and USS NEW HAMPSHIRE (SSN 778) in October.

General Dynamics Electric Boat and NGSB-NN continue to jointly produce Virginia Class submarines and are working with the program office to reduce the construction time and cost of these ships. An eight-ship, multi-year procurement contract for the FY 2009-2013 ships was signed in December 2008. The contract achieves the cost reduction goal of \$2 billion (FY 2005\$) with the FY 2012 ships as well as the two per year build rate starting in FY 2011.

SSBN Engineered Refueling Overhauls (EROs)

The Ohio Class SSBN Engineered Refueling Overhaul Program continues. USS ALASKA (SSBN 732) completed her overhaul in March 2009; USS NEVADA (SSBN 733) will complete her overhaul in 2010; and USS TENNESSEE (SSBN 734) will complete her overhaul in 2011. These EROs are a one time depot maintenance period, near the mid-point of the SSBN service life, during which the nuclear reactor is refueled, major equipment is refurbished, class alterations are installed, and SUBSAFE unrestricted operations maintenance is accomplished.

Surface Combatants

Today's Navy is operating in an increasingly complex and challenging environment. Demand from Combatant Commanders for traditional Navy core capabilities, forward presence, deterrence, sea control, and power projection by surface combatants operating both independently and with strike groups is increasing. The new Maritime Strategy also calls for expanding capabilities in Integrated Air and Missile Defense to include ballistic missile defense, maritime security, disaster relief and humanitarian assistance.

DDG 51 Class

DDG 51 is a proven, multi-mission guided missile destroyer. She is the Navy's most capable ship against ballistic missile threats and adds capacity to provide regional ballistic

missile defense. The risks associated with re-opening the DDG 51 line are less than those of a new start platform and will provide the Navy ballistic missile defense capability more affordably.

This proven program will commission DDGs 103 and 106, TRUXTUN and STOCKDALE, respectively, in April 2009. DEWEY (DDG 105) and WAYNE E. MEYER (DDG 108) will be delivered to the Navy this year.

Restarting the DDG 51 line is a central focus of the Navy. Acquisition strategies are being formulated and advanced procurement efforts to restart the line should be contracted this spring.

CG 47 Modernization

Twenty-two Aegis Cruisers remain in service and are planned to receive modernization upgrades. A comprehensive Mission Life Extension is critical to achieving the ship's expected service life and includes the All Electric Modification; SMARTSHIP; hull, mechanical, and electrical (HM&E) system upgrades; and a series of alterations designed to restore displacement and stability margins, correct hull and deck house cracking, and improve quality of life and service onboard. Cruiser Modernization bridges the gap to future surface combatants and facilitates a more rapid and affordable capability insertion process. The first full modernization availability was completed on USS BUNKER HILL (CG 52) in February 2009.

DDG 51 Modernization

The DDG 51 modernization program is a comprehensive effort to modernize the Arleigh Burke class ships' combat and HM&E systems. As ships are modernized halfway through their 35-year estimated service life, each ship will be enabled to achieve an additional 10-15 years of life that historically has been reduced by early decommission due to both the inability to pace the threat and to high operating costs. This program is modeled on the successful CG Modernization program and will occur in two phases. The first phase is the HM&E phase. These upgrades support workload reduction, operating costs minimization, expected service life achievement, and projected threat pacing well into the 21st century.

The second phase, expected to commence in FY 2012, will consist of a full combat systems computing plant and Combat Information Center replacement, known as Advanced Capability Build 12 (ACB-12). ACB-12 will allow the class to field substantial capability against ballistic missiles, new generation advanced anti-ship cruise missiles and new, quieter submarines now in the hands of potential adversaries.

The first DDG to be modernized will be USS ARLEIGH BURKE (DDG 51), planned for FY 2010.

DDG 1000 Destroyer

DDG 1000, with its Dual Band Radar and sonar suite design, is optimized for the littoral environment. However, in the current program of record, the DDG 1000 is incapable of conducting Ballistic Missile Defense. Although superior in littoral ASW, the DDG 1000's lower

power active sonar design is less effective in the blue water than DDG 51 capability. DDG 1000's advanced gun system provides enhanced naval fires support capability in the littorals with increased survivability. In support of the Defense Appropriations Act for Fiscal Year 2009 direction, the Joint Requirements Oversight Council (JROC) reviewed and concluded that existing surface combatant and Joint Surface Fires requirements remain valid. The Navy will return to the JROC this summer to address the way ahead for naval surface fires.

The Navy began construction of DDG 1000 in February 2009. A rigorous systems engineering approach has been employed to mitigate the risk involved with building a complex lead ship surface combatant. This approach included successful building and testing of the ten critical technologies via engineering development models. Naval Vessel Rules were fully accommodated in detail design. Mission systems design is nearly complete. Detail design was also near completion prior to the start of fabrication – more complete than any other previous surface warship.

The research, development, test and evaluation efforts for the DDG 1000 program, which include software development and other critical efforts, must continue in order to deliver the necessary technology to completed ships and to the CVN 78 Class.

CG(X)

Vital research and development efforts are in progress for the Air and Missile Defense Radar which paces the ship platform development. Engineering development and integration efforts include systems engineering, analysis, computer program development, interface design, engineering development models, technical documentation, and system testing are in process to ensure a fully functional CG(X) system design.

Littoral Combat Fleet

LCS fills warfighting gaps in support of maintaining dominance in the littorals and strategic choke points around the world. The LCS program capabilities address specific and validated capability gaps in Mine Countermeasures, Surface Warfare, and ASW. The concept of operations and design specifications for LCS were developed to meet these gaps with focused mission packages that deploy manned and unmanned vehicles to execute a variety of missions. LCS' inherent characteristics (speed, agility, shallow draft, payload capacity, reconfigurable mission spaces, air/water craft capabilities) combined with its core Command, Control, Communications, Computers and Intelligence, sensors, and weapons systems, make it an ideal platform for engaging in Irregular Warfare and Maritime Security Operations.

Littoral Combat Ship (LCS)

The Navy is aggressively pursuing cost reduction measures to ensure delivery of future ships on a schedule that affordably paces evolving threats. This will be accomplished by matching required capabilities, to a recurring review of warfighting requirements through applying lessons learned from the construction and test and evaluation periods of sea frames and mission packages. USS FREEDOM (LCS 1) was delivered to the Fleet on September 18, 2008 and was commissioned in November. INDEPENDENCE (LCS 2) was christened in Mobile,

Alabama on October 4, 2008. Later this year, the program will deliver that second ship, of a completely different design.

In October 2008, the Undersecretary of Defense for Acquisition, Technology and Logistics approved a revised acquisition strategy for LCS to cover procurement of the FY 2009 and FY 2010 ships. The updated strategy combines the FY 2009 procurement and FY 2010 options to maximize competitive pressure on pricing as a key element of cost control. Increasing the quantity solicited by adding the FY 2010 ships to the FY 2009 solicitation as options will also enable industry to better establish longer term supplier relationships and offer the potential for discounting to the prime contractors and subcontractors. The FY 2009 ships and FY 2010 ship options will be fixed price type contracts.

Acquisition strategies for FY 2011 and outyear ships are under development. The Navy's strategy will be guided by cost and performance of the respective designs, as well as options for sustaining competition throughout the life of the program. Combat systems and HM&E design will be evaluated throughout the test and trial periods and we are already looking for opportunities to reduce total ownership costs.

Amphibious Ships

These ships provide distributed forward presence to support a wide range of missions from forcible entry to conventional deterrence, Theater Security Cooperation, and humanitarian assistance. In major combat operation, sufficient amphibious ships are required to support two Marine Expeditionary Brigades (MEB). As an organization principle, this requires the Navy to maintain a minimum of 38 amphibious ships. Understanding this requirement and in light of the fiscal challenges with which the Navy is faced, the DoN will sustain a minimum of 33 amphibious ships in the assault echelon. This 33 ship force accepts risk in the arrival of combat service support element of the MEB, but has been adjudged to be adequate to meet naval service needs within today's fiscal limitations.

WASP (LHD 1) Class Amphibious Assault Ship

MAKIN ISLAND (LHD 8), the last of the Wasp Class, completed acceptance trials in March 2009 and will be delivered this spring. Although a modified repeat of the previous seven ships, this ship introduced a gas turbine propulsion system with all electric auxiliary systems and eliminated the steam plant and steam systems.

LHA (R) General Purpose Amphibious Assault Ship (Replacement)

The LHA (R) Assault Echelon ship, the functional replacements for LHA 1 Class ships, will provide the Nation forcible entry capability and forward deployed contingency response forces. These ships have enhanced hangar and maintenance spaces to support aviation maintenance, and increased jet fuel storage and aviation ordnance magazines. LHA 1 Class ships will reach the end of their extended service life in 2011-2015, and limited fabrication of the first ship of the new class, AMERICA (LHA 6), began in December 2008.

LPD 17 Class Amphibious Warfare Ship

The LPD 17 Class of amphibious warfare ships represents the Navy's commitment to a modern expeditionary power projection fleet that will enable our naval force to operate across the spectrum of warfare. The class replaces four classes of older ships – the LKA, LST, LSD 36, and the LPD 4 – and will have a 40-year expected service life. SAN ANTONIO Class ships will play a key role in supporting the ongoing Overseas Contingency Operations by forward deploying Marines and their equipment to respond to crises abroad. USS GREEN BAY (LPD 20) was commissioned in January 2009 and USS NEW ORLEANS (LPD 18) deployed the same month. New York (LPD 21) is planned to deliver this fall.

Auxiliary and Intra-Theater Lift Platforms

Combat logistics force ships are critical for forward deployed forces. The vital role of underway replenishment of such items as fuel, food, repair parts, and ammunition enable Navy ships to operate for extended periods at sea. The extended operating demands for vessels such as Joint High Speed Vessels (JHSV) and LCS for intra-theater lift, Theater Security Cooperation, or engagement missions will place a high demand for support on existing logistics shipping and increase the operating tempo of the Combat Logistics Force ships. Intra-theater lift is key to enabling the United States to rapidly project, maneuver, and sustain military forces in distant, anti-access or area-denial environments.

The Maritime Prepositioning Force (Future) (MPF(F)) provides a scalable, joint, sea-based capability for the closure, arrival, assembly, and employment of up to a Marine Expeditionary Brigade-sized force. MPF(F) ships will be forward deployed to enable rapid closure to areas of interest in the event of the crisis. When combined with the Amphibious Ready Groups, Carrier Strike Groups, and Amphibious Task Forces, the MPF(F) operational capacity can be employed across the full range of Military operations. It will provide prepositioning equipment and supplies for a Marine Expeditionary Brigade and is essential to reinforcing the assault echelon of the Marine Expeditionary Force during forcible entry operations. The MPF(F) can operate in a disaggregate mode for Lesser Contingency Operations such as humanitarian assistance and peace enforcement.

Maritime Prepositioning Force (Future)

In March 2006, the Defense Acquisition Board approved program entry into the Technology Development Phase. The Navy recently awarded a preliminary design contract to General Dynamics National Steel and Shipbuilding Company (NASSCO) for the Mobile Landing Platform – one of the MPF(F) vessels.

Lewis and Clark Class Dry Cargo/Ammunition Ship (T-AKE)

T-AKE replaced the Navy's combat stores (T-AFS) and ammunition (T-AE) shuttle ships. Working with an oiler (T-AO), the team can perform a "substitute" station ship mission which will provide necessary depth in combat logistics. Fourteen T-AKE ships are covered under a fixed-price incentive contract with NASSCO. Three of the T-AKEs are to support MPF(F) program requirements. Major accomplishments for 2008 include delivery of USNS ROBERT E. PEARY (T-AKE 5) in June 2008 and USNS AMELIA EARHART (T-AKE 6) in

October 2008. USNS CARL BRASHEAR (T-AKE 7) delivered in March 2009 and WALLY SCHIRRA (T-AKE 8) will deliver later this year.

Joint High Speed Vessel (JHSV)

The Joint High Speed Vessel (JHSV) program is for the acquisition of high-speed vessels for the Army and the Navy. JHSV will be a high-speed, shallow draft surface vessel able to rapidly transport medium payloads of cargo and personnel over intra-theater distances to austere ports, and load/offload without reliance on port infrastructure. The detail design and lead ship construction contract was awarded to Austal, USA on November 13, 2008, and includes contract options for nine additional ships for the Army and Navy. Delivery of the first vessel will be to the Army and is expected in 2011.

Ship Leasing

The Department of Defense charters ships to respond efficiently when a military requirement is immediate, subject to change, or of uncertain duration. Ships are initially contracted for a lease of 12 months or less, with options to extend use up to 59 months total. Currently, there are 28 ocean-going vessels under time-charter for periods that fall in the long-term category; 13 of these are U.S.-flagged foreign-built ships. Of the 13, three have been chartered since the 1980s, as authorized by law, but will be terminated in July 2009. To meet the USMC need, the Navy recently purchased three U.S.-built ships formerly on long term charters to support the Military Sealift Command's (MSC) Maritime Prepositioning Ships strategy.

Since 2002, the number of foreign-built ships under charter has declined from 22 to 13. Few commercial ships with military utility have been constructed in United States' shipyards in the past 20 years. Consequently, when MSC must charter a vessel, most of the offers are for foreign-built ships. When a foreign-built ship is used for these charters, the ship is required to be converted to U.S.-flag, and crewed by United States citizen mariners prior to the beginning of the charter. Conversion work must be accomplished in a United States shipyard.

Summary

The Navy has come through many difficulties associated with lead ships and sustained production is proceeding. We are addressing issues with the acquisition workforce and realize our government talent has atrophied. We have instituted the acquisition governance process to aid continual requirements/acquisition communication. We are committed to meeting the force structure required to meet the Maritime Strategy.

ACQUISITION WORKFORCE

Mr. MURTHA. Ms. Secretary, you talk about interns. Define what you mean by interns.

Ms. STILLER. Yes, sir. It is an entry-level position where we bring people into the acquisition community train them. We get them exposure to different programs and disciplines like contracting, budgeting, program management. They serve as a junior employee in the organization, and we grow them into acquisition professionals.

Mr. MURTHA. So these are young engineers just out of college or—and they have to go through a certain qualification before they can become acquisition experts or you don't have the spaces or what? Why would you just not hire them—why do you call them interns?

Ms. STILLER. Because, in order to be a qualified acquisition professional, there is training that you have to go through. Some of the interns are right out of college, but they can be midcareer folks that decide they want a job change. For entry into the acquisition corps, there are core courses they have to take. We work with them to make sure they are getting those courses and that they are mentored by folks who have been around for a while conducting the knowledge transfer so we have a really good, solid basis for them to start their career.

Mr. MURTHA. I like what you are saying. Because this subcommittee has been in the forefront trying to make sure that there is some stability in the shipbuilding industry. And acquisition has been a big part of it. It sounds like you are talking about more maturity, more people involved in shipbuilding; and it sounds like you will stabilize it at some point. And the LCSs will be a big part of it, it sounds like.

ELECTRO-MAGNETIC AIRCRAFT LAUNCHING SYSTEM

Now, a couple of other questions. On the launching system on the carrier, is that going to slow down the carrier, the new launching system?

Ms. STILLER. We are still analyzing EMALS, the electromagnetic launching system that you mentioned. We do not see that it will have an impact on the actual schedule of the carrier at this point in time.

Mr. MURTHA. I keep hearing rumors that they are studying the alternative, going back to steam. Is that accurate?

Ms. STILLER. Yes, sir. We are looking at all options.

There has been cost growth to the EMALS system. We are looking at the total cost, both acquisition and life cycle, for EMALS and steam. We are looking at schedule and what does that do if we went back to steam on CVN-78. We are in the process of getting information from industry so that we can make an informed decision. We have had independent technical authorities look at it within the Department.

Mr. MURTHA. You reduced personnel and maintenance by 39 people. Are you to the point where the cost growth overcomes the savings in personnel?

Admiral MCCULLOUGH. Mr. Chairman, we have looked at that. And right now, both due to the reduction in personnel required to

man a launching system, the increased operational availability and the reliability of the EMAL system, there are still life-cycle savings over what we would have if you went back to steam catapults.

Mr. MURTHA. The Secretary said earlier that, unless these systems were mature, we weren't getting involved in them. This is a pretty big part of, obviously, the carrier. Was it not mature when you started—I thought this had been used over and over again. I thought we had some stability by going to this EMAL system.

Ms. STILLER. Yes, sir, there is a development effort that had to start and is still continuing to get EMALS to apply to the aircraft carrier. The technology itself is not new, but it is the application in the aircraft carrier.

There is a lot of rigor we want to go through for component testing so we understand the liability of the components as well as system testing. We are in the component testing phase right now. We have seen minor issues in testing which we have been able to resolve. But there is some concurrency with the schedules and that is one of the things we want to evaluate going forward. Is the development schedule still ongoing? How do we mitigate the risk to the carrier schedule so that that doesn't change, we don't see an impact to the carrier schedule.

Mr. MURTHA. What will it do to the cost of the system if you had to switch to steam?

Ms. STILLER. I don't have that information yet. We are waiting on a cost estimate from Northrop Grumman Shipbuilding, Newport News.

Mr. MURTHA. What does it look like at this point? Are you going to go with the EMALS or are you going to go with the steam?

Admiral MCCULLOUGH. Right now, Mr. Chairman, the plan is to go to with EMALS or to continue with electromagnetic aircraft launching system. That is going to be briefed to the CNO and the Acting Secretary here in the next week to 10 days.

We need EMALS technology to support higher energy launches of our aircraft. As we look at what we have been doing in Iraq and Afghanistan, specifically going into Afghanistan, we have had to up the number, if you will, of high energy launches we are executing to support sending Super Hornets into Afghanistan. That creates excessive wear not only on the aircraft but also on the energy absorption system on the front end of the ship known as the water brakes that catch the launch cylinder spears.

EMALS will give us a steady acceleration across the launch of the aircraft down the catapult track and has much less impact on both the airplane and the ship when you have the EMAL system on the ship. It also gives us much greater energy capacity for the high energy launches; or if you are using the standard load configuration on the aircraft, it requires significantly less wind over deck on the aircraft carrier. With the reduced requirements for wind over deck, it gives you greater operational flexibility in the carrier operating areas when you lay them down in an operational theater. So the Navy needs the EMALS capabilities as we move forward with our next-generation aircraft carrier and aircraft.

Mr. MURTHA. Is this just a computer design at this point or is this being built?

Ms. STILLER. No, sir. The components are built and in testing. We are working to get the land-based facility at Lakehurst. There is an installation ongoing there right now.

So, no, sir, there are components to this. This is not a design.

Mr. MURTHA. So it would be extremely expensive if we switched back to steam, spending all this money on EMALS at this point?

Ms. STILLER. Again, sir, I am waiting for the estimate from Newport News, what that would do to the cost and schedule. I just don't have that information yet.

Mr. MURTHA. Mr. Young.

USS HARTFORD COLLISION

Mr. YOUNG. Mr. Chairman, thank you very much.

I want to talk about the LCS program, but, before that, I would like for you to tell us what we haven't read in the newspapers about the collision between the submarine and the ship.

Admiral MCCULLOUGH. Congressman, the investigation is ongoing in that collision. So I would really be remiss to discuss what is going on in an internal investigation in a Fleet Commander's area of responsibility.

It was an unfortunate incident. We are extremely pleased that none of the Sailors were badly injured and that both ships were able to make port in Bahrain under their own power. The damage assessment for both the submarine and the LPD are currently ongoing in Al Manamah, Bahrain.

Mr. YOUNG. Does it appear that the submarine is fixable? I understand it had more damage than the ship?

Admiral MCCULLOUGH. The preliminary reports that I have read from the Naval Sea Systems Command indicate that the submarine is repairable, yes, sir.

LITTORAL COMBAT SHIP

Mr. YOUNG. Okay. The LCS program, which has run into some problems—you have just awarded the contract for LCS-3, but you had cancelled LCS-3 and -4 before because of the experience with LCS-1 and LCS-2. Where are we headed? I understand the importance of this new type of ship; and I tell you, Vern Clark, when he was CNO, spent a lot of time educating me on the importance of LCS. But are we ever going to build 55 of them?

Ms. STILLER. Yes, sir. That is the requirement at the moment—55, and we are still planning to.

Just to give you a sense of where we are today on LCS, LCS-1 is delivered. She is in an availability in Norfolk and will wrap up early next week. She will go to her acceptance trials at the end of the month. We are very pleased with how LCS-1 is proceeding.

LCS-2 is in construction. The General Dynamics GD-Austal team that is down in Mobile and we expect that ship will deliver this summer.

We had a significant event last week. We had main propulsion diesel light off on the ship. So the construction is proceeding well.

So we are much further along with those ships than we were when we had awarded LCSs 3 and 4 last time. We have got one ship delivered and one very close to delivery. As I said, we have

awarded the LCS-3 to the Lockheed Martin team and we are still in negotiations with General Dynamics.

But I feel very comfortable. Those fiscal year 2009 awards are tied to the fiscal year 2010 ships. We are awaiting the bids on the fiscal year 2010 ships as well.

Mr. YOUNG. What is the contract cost for the new LCS-3 as compared to the original LCS-3?

Ms. STILLER. Sir, the fiscal year 2009, the LCS-3 award, the fiscal year 2010 ships are tied to that. We are still in a competitive environment. We have not made public that award amount. But I am happy to provide that to you but not in an open hearing.

Mr. YOUNG. Okay. I understand that. Can you tell us if it is more or less or the same?

Ms. STILLER. Yes, sir, it is less. We took a long time here in negotiating these two '09 ships, because we are really focused on affordability, and we have been working closely with the industry folks to figure out how we are driving costs. We work with the requirements community as well on how we can drive costs out of these ships. We are on the path to getting affordable LCSs as we go forward, and I think you will see from our 2009 awards that we are on that path.

Mr. YOUNG. LCS-1 and 2, 3 and 4 are different designs, is that not correct? I mean, they are not identical ships?

Ms. STILLER. They are two different designs, yes, sir, that meet the same requirements list. But, yes, LCSs 1 and 3 at this point are one design and LCS-2, and when we award 4, will be of a similar design.

We have tried very hard to make sure there is not a lot of change between those ships. Obviously, as we learn things in tests and trials that we have to fix, we will want to make sure those get on the following ships. But these ships should look very similar if they are built of that same design.

Mr. YOUNG. But we are not far enough into the program to know whether one design is superior to the other or more cost-effective?

Admiral MCCULLOUGH. That is correct, sir; and we still intend to compare the ships from both an operational assessment and acquisition cost perspective and a total-life-cycle cost perspective to see if we should down select the one particular design.

Mr. YOUNG. I understand that the military requirements and the Navy's requirements are considerably different than a commercial ship. But in a commercial world a contract is pretty much—a design is agreed upon, all these things are done before the contract is let and the construction begins. I understand that the Navy has different missions, and the mission changes from time to time. So you can't really do that. But are we—will the new acquisition process help us get a little more for the dollar?

Ms. STILLER. Yes, sir. One of the things that we have really been taking a hard look at and a hard line on is the percent complete in design before we ever start production. For example, DDG-1000, the design is over 85 percent complete before we agree to start fabrication on the lead ship. The same thing with CVN-78. It is in the 80-85 percent range of completion of design before we start construction on that ship. We did not do that on LCSs. We learned that lesson again, and I would tell you that we are very focused

on making sure that the design is of adequate completion before we start construction.

Mr. YOUNG. Well, thank you very much for the information on the LCS.

I am sure other members will want to talk about DDG-1000 and maybe even ask about DDX, but, Mr. Chairman, I know I have used my time, so I yield back. Thank you very much.

Mr. MURTHA. We appreciate the pressure you put on to get the price down. Because when you originally came to the committee, all of us knew—I knew in particular—it wasn't going to come in at the initial cost. So I appreciate you learned a lesson. And we helped by pressuring the companies and saying to them, we are not going to pay that kind of price, so let's get this down. When I went to both places I told them that. So I appreciate what you have done.

Ms. Kaptur.

LEASING OF FOREIGN BUILT SHIPS

Ms. KAPTUR. Thank you, Mr. Chairman.

Welcome. Great to have you.

I am going to go back, Secretary Stiller, to a question I asked you last year about leasing of foreign-built ships. As I recall the answer last year, there was this schedule that there was a declining path of foreign-leased ships. Could you please tell me—you said last year that the committee—that the Navy had leased 17 foreign-built U.S.-flagged vessels at that point. Could you please tell us how many foreign-built ships are currently being leased?

Ms. STILLER. Yes, ma'am, 14. Back in 2002, we were at 22; last year, as I testified, we were at 17, and today we are at 14.

Ms. KAPTUR. What path are you on for the future?

Ms. STILLER. We continually review the requirements for what constitutes a long-term lease. In fact, in my written testimony I mentioned there were 28 in long-term charters. Since the written testimony, I am down to 26. We bought three leases out, and then we added one because it was a 6-month option. We are committed to try and drive that out.

The complicating factor is there are not a lot of U.S.-built commercial vessels out there to meet our needs. We do end up having to look at foreign-built ships. Now they have to be U.S. flagged, and they have to be U.S. crewed. We have been diligently working at this to try to get the number down, and I am happy to say we got it down this year.

CONSTRUCTION OF SMALL VESSELS

Ms. KAPTUR. All right. That is a very good report.

And how do small shipyards compete for Navy contracts?

Ms. STILLER. If it is a small vessel, we put out a request for a proposal and anybody that wants to compete is certainly welcome to compete. We do have a lot of smaller shipyards participating in ship acquisition.

Ms. KAPTUR. Do you ever do briefings for those smaller competitors around the country?

Ms. STILLER. It depends on the country. We have had industry days where we welcome them to come in and hear what our requirements are, and they can ask questions if they think something

is going to be a cost driver to us. It is good for us to hear that up front so we don't make a mistake going in.

Ms. KAPTUR. If you have anything planned—obviously, I am up there on the Great Lakes. If there is anything you have planned that would permit greater information to be shared with shipyards up on the Lakes, we would appreciate that. If you could give us a contact that might know a lot about what is going on in the Department, I would certainly appreciate that very, very much.

SHIPBUILDING INDUSTRIAL BASE

What would happen if Congress were to prohibit the Navy's ability to enter into leases on foreign-built ships?

Ms. STILLER. I will get you a detailed answer on that, but I will give you my initial impressions.

Like I said, there are very few U.S.-built commercial ships anymore. It would be very costly for the Department because we would likely be forced into building these ships to meet our requirements; and my concern would be the warship procurements that we need to do, as opposed to these ships that are truly for specified periods of time, would the Department have to pay for those ships?

Ms. KAPTUR. Well, you have referenced the fact that, in the commercial sector, the number of ships being constructed in this country has gone down and we know that our shipbuilding industrial base is really limited now to about six companies. And contractors have stated that increased volume, of course, would help stabilize the industrial base.

What do you see as a possibility for us restoring our shipbuilding industrial capacity? Can it be done through componentry? I know in the automotive industry there are twice as many people employed in the parts plants as the assembly plants, and I am just curious in terms of shipbuilding whether the same rule applies and whether by saving the componentry we could ultimately save the ability to make the larger vessels. How do we really solve the problem of retaining that industrial capacity for ships in our country?

Ms. STILLER. You make a very good point. There are suppliers, obviously, for our ships and so we have to manage that part of the industrial base as well. I will give you an example. For submarines, over 80 percent of the suppliers are sole source to us now because of the low rates.

Mr. MURTHA. Say that again.

Ms. STILLER. Over 80 percent of the submarine suppliers are sole source. Because we got down to such low levels of procurement. We have to watch that industrial base very carefully.

For example, on the DDG-51, restarting the program, we asked for a significant amount of advanced procurement for that restart ship because we know that there are some vendors out there that the last time we bought components from them was fiscal year 2002. We know we need to help them restart their line so they can get the components going. We have done a very thorough scrub of that. So we do monitor our second-tier suppliers that are supplying to the shipyards very carefully.

Ms. KAPTUR. Is there a summary that you have of what you view as the ingredients for our shipbuilding capacity?

Ms. STILLER. I would say our shipyards have had varying levels of success in getting into the commercial side of the House. There is a law. The Jones Act requires that ships be procured in a U.S. yard if you are going to do trade between a U.S. port and another U.S. port. There aren't a lot of Jones Act ships built in recent past, although there are some right now. It just depends on the shipyard. They will tell you that the skill sets to build a commercial ship are very different from a warship and it is hard to translate. It is hard to tell a nuclear welder you don't have to be to that level of standard to build a commercial ship.

Ms. KAPTUR. I know my time is close to expiring, if not expired. Let me just ask you, could you provide the committee with your best summary of what you view is the essential ingredients for our defense shipbuilding industrial capacity? What are the ingredients of that?

Ms. STILLER. Yes, ma'am. I will be happy to provide that.

Ms. KAPTUR. Okay. Thank you.

[The information follows:]

The Department believes that stability in the shipbuilding program is a key ingredient in sustaining a cost effective and capable capacity in the shipbuilding industry. Toward that end, the Department of the Navy will continue to work with the Congress to ensure a stable shipbuilding strategy that is aligned with the FY 2010 President's Budget.

The acquisition and requirements communities have developed an affordable long term shipbuilding plan that provides the foundation for stability and capacity in the industrial base. The goal is to provide a stable long-term shipbuilding plan that reduces industrial base volatility and allows the industry to better match investments to meet Navy capabilities.

The Navy works with its industry partners to consider several factors to control costs and improve stability: (1) level loading shipyards to sustain employment levels and skill retention, and stabilize workloads through work share opportunities and regional outsourcing; (2) greater use of contract incentives, such as multi-year procurement, fixed price contracts and increased competition; (3) reducing ship types, maximizing reuse of ship designs and common components, and implementing open architecture; (4) maturing ship designs prior to start of construction; and (5) emphasizing design for affordability in both initial design and follow-on ships. The Navy is also working with industry to identify capital investment strategies which will have cross program benefits.

Mr. MURTHA. Mr. Frelinghuysen.

SUBMARINE PROCUREMENT

Mr. FRELINGHUYSEN. Thank you very much, Mr. Chairman.

I would like to talk about those, Ms. Stiller, what you characterize as the low levels of procurement for subs. Generally speaking, on the submarine fleet—and, Admiral, you mentioned it—the Chinese seem to be—at least there is evidence that they are working on a 200 sub fleet. The Iranians have some sort of a sub which would I think alarm most of us. The Indians I understand are purchasing some subs from Russia. I assume Russia is not standing still.

I know this committee is keenly interested in this issue. And we have been—we are procuring—correct me if I am wrong—two Virginia class subs a year; and you have got, I think from your testimony, six under way. Is that correct?

Admiral MCCULLOUGH. Yes, sir. I believe the number is six that have been commissioned.

Mr. FRELINGHUYSEN. Could you comment on whether this is going to meet our needs, given, let us say, what our potential adversaries are doing in terms of—

Admiral MCCULLOUGH. Yes, sir. I can talk to that.

You bring up a point about Chinese submarines. The Chinese are building submarines today. They have approximately—

Mr. FRELINGHUYSEN. Are their subs nuclear and diesel?

Admiral MCCULLOUGH. They are both, sir. The ones we worry about, obviously, are the high-end, very quiet, diesel—electric submarines. They are exceptionally hard to find. The Chinese have a variety of submarines, from those that are extremely loud acoustically to those that are not; and they are increasing the proficiency of their crews based on some things that we have seen. So that is of concern to us. Our force structure analysis says we need 48 nuclear-powered attack submarines.

Mr. FRELINGHUYSEN. Our attack submarines today are Virginia and Los Angeles?

Admiral MCCULLOUGH. Correct, sir. And there are a couple of variants to Los Angeles. There are 688s, and then there are improved 688s. So there are our submarines today. And then we have the three SeaWolfs, one of which is a special projects boat.

So we have defined a requirement of 48 submarines. In about the 2027 time frame—and I might be off one year one way or the other—we go down to about 41 submarines.

Mr. FRELINGHUYSEN. So there is a retirement process? Have some of the Los Angeles class subs been retired?

Admiral MCCULLOUGH. Yes, sir, that is correct.

Mr. FRELINGHUYSEN. Between now and 2027, how many of those subs will be retired?

Admiral MCCULLOUGH. I will have to get you that number, sir. I don't have that in front of me. And I will gladly—

[The information follows:]

Between now and the end of FY 2027 we plan to retire all but six of our current Los Angeles class submarines, or a total of 39 retirements.

Mr. FRELINGHUYSEN. We are extending the life of some of those?

Admiral MCCULLOUGH. We have looked at extending a certain number of submarines to help mitigate the aspects of that delta that I spoke of, and it fills in the gap somewhat. Beyond that, we have recently completed a study with Naval Reactors that looked at extending, I believe, about 16 more Los Angeles class submarines, and it is based on fuel consumption and projected fuel consumption. And that would mitigate the gap I think by an additional two, if we extend it an additional 16 submarines. There is obviously—

Mr. FRELINGHUYSEN. When it is all said and done, today we have 53.

Admiral MCCULLOUGH. Yes, sir, that is correct.

Mr. FRELINGHUYSEN. Fifty-three. How many subs would we have, let us say, 5 or 10 years from now? I know the capacity of the Virginia class is pretty incredible, but that doesn't necessarily get us where we need to go.

Ms. STILLER. One of the things we have done on the acquisition side, we accelerated when we went to two submarines a year and that is part of this multiyear procurement? We are buying—

Mr. MURTHA. You said “we”. This committee?

Ms. STILLER. Yes, sir.

Admiral MCCULLOUGH. We asked for it, and you increased it, sir.

Ms. STILLER. Two a year in 2011. So we have tried to mitigate that from the acquisition side as well.

Mr. FRELINGHUYSEN. The notion that our adversaries are willing to confront us anywhere in the world—obviously, we need more surface ships. But the notion that somehow we would be outflanked by—some people sort of demean what the Chinese might be coming up with in terms of their subs, but I don’t think we ought to underestimate their capability.

What about the issue of the converted trident? Is there some activity going on there? Those are the huge subs?

Admiral MCCULLOUGH. Yes, sir.

Mr. FRELINGHUYSEN. What is going on there? And does that give us some more legroom?

Admiral MCCULLOUGH. We converted four of the Ohio class submarines into nuclear-power guided missile submarines. OHIO is one of those boats. She recently completed her maiden deployment as an SSGN, and it was a highly successful deployment. We are currently evaluating how those submarines contribute to the overall submarine force to determine if we should recapitalize those boats when they go out of service.

Mr. FRELINGHUYSEN. So you are taking a look at that?

Admiral MCCULLOUGH. Yes, sir, we are.

You asked me how many submarines we will have. We don’t go below 48 submarines until 2021. And then it decreases to about 41 in 2027, as I said, and then the ramp starts back up, and then we go over 48 submarines again in 2024.

Some things we have done to mitigate that are to accelerate or decrease the production time on the Virginia class submarines, and it started out at about 84 months. It is down to about 66 months now. As I said, we retained some of the Los Angeles class submarines that we were going to decommission, and we have looked at increasing deployments from 6 to 7 months to try to mitigate this gap. As was mentioned, with the help of the committee, we did add the second Virginia class submarine in at 2011; and we hadn’t planned to do that until 2012. So that also gave us some partial mitigation in the submarine gap.

We take very seriously the submarine threat posed by potential adversaries globally. We monitor their activities on a daily basis. So we have many programs, not only nuclear-powered submarines but things associated with surface ships and distributed arrays and airplanes to try to address that threat.

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

I was with—and he didn’t ask me to ask these questions—with Admiral Donald over the weekend under the ice, and I can’t tell you—if any of you have an opportunity obviously to be on a sub. But that particular ice exercise, you can’t help be impressed by the dedication of those men on those subs. My God, they work so closely together and with remarkable spirit. It is a special breed of people.

Thank you, Mr. Chairman.

Mr. YOUNG. Mr. Moran.

Admiral MCCULLOUGH. Thank you for saying that, Congressman.

HOMEPORTING OF AIRCRAFT CARRIERS

Mr. MORAN. Thanks, Mr. Chairman.

The former Secretary of the Navy facilitated the decision to move an aircraft carrier from Norfolk down to Mayport. But the justification for that relocation is awfully spotty; and the military construction, just to enable it to happen, will cost over \$1 billion, just to prepare the port. It seems like a questionable expenditure when the subcommittee's concern has been the shipbuilding shortfall and the unfunded requirements that exceed \$500 million.

People are going to characterize this as a turf battle between States and so on, but I think it really affects more the ability of our shipbuilding resources to be used most efficiently and effectively. What is the latest status of this issue and how can you justify spending that kind of money when we have the demand that we do for additional ships?

Either one of you can answer. I think the Admiral should proceed, initially.

Admiral MCCULLOUGH. Yes, sir. Thanks for that question.

The Navy thinks it is very important to have a second nuclear-powered carrier base or capacity on the east coast. On the west coast, currently, we have Bremerton and San Diego; and each of those facilities has the associated nuclear maintenance infrastructure to perform at least I level maintenance, i.e. intermediate-level maintenance on the aircraft carrier.

On the east coast, we have one facility in Norfolk, Virginia. The building yards in Norfolk Naval Shipyard and the repair capacity are all located within about an 11 nautical mile radius from pier 12—or pier 14, I think we call it now—where we dock the aircraft carriers. So we deem it necessary to have an alternate capacity on the east coast should anything happen to preclude getting an aircraft carrier into its own port on return from deployment, or should anything happen to the port and we had the carrier force base continue to all be based in Norfolk.

We have looked at this from a multitude of ways. If you look at the carriers typically that we don't have in long-term maintenance or deployed, the ready response force if you will, on the east coast there is about 2½ to 3 aircraft carriers at the pier in Norfolk on any given day. If you blocked the exit or entrance to that harbor for any reason whatsoever, that would tie up 100 percent of the ready carrier reserve force that we have available on the east coast.

If a carrier was returning from deployment and scheduled to go into its maintenance availability upon return from deployment and was precluded from getting into its own port in Norfolk and you don't have the alternate carrier capacity on the east coast, the carrier would be forced to go to the west coast for maintenance.

Carriers are not PANAMAX, as you well know, Congressman. So it would have to go around South America to get to a maintenance base on the west coast.

Mr. MORAN. Admiral, has that ever happened?

Admiral MCCULLOUGH. No, sir, it has never happened. The last major hurricane I believe that went into Norfolk and significantly

altered the bottom was in about 1803 when Willoughby Spit was formed.

Mr. MORAN. 1803 was the last time—

Admiral MCCULLOUGH. The last significant hurricane that altered the configuration.

That said, there are—as you know, the Thimble Shoals channel is about 15 nautical miles long, and it is the only way in and out of Norfolk for an aircraft carrier. There are two single-point failures on that channel, the Hampton Roads Bridge Tunnel and the Chesapeake Bay Bridge Tunnel. So I would tell you it is prudent operationally to have a second carrier base with its maintenance facility or second carrier capacity with maintenance capacity on the east coast.

Mr. MORAN. Well, you have been well briefed certainly, but I could tell you that there are many responsible people in the Navy who felt that building this kind of redundant port was an unnecessary use of scarce money and that have told me privately—that is why I can't reveal their names publicly—that this was under political pressure from the last White House. The naming of the ship and the political benefit seemed to outweigh the use of scarce resources.

Admiral MCCULLOUGH. Sir, I would tell you I was a Strike Group Commander for both Kennedy Carrier Strike Group and Enterprise Carrier Strike Group and that was stationed in Mayport. Mayport has historically had a carrier base there, a conventional carrier as an alternate carrier base on the east coast; and only as we have downsized our carrier force have we stationed all the aircraft carriers on the east coast in Norfolk.

I would tell you again that I think—and I haven't been well briefed. I have looked at this, and I have operated these types of capabilities, and I think it is in the Navy's best interest and in the Nation's best interest to have an alternate carrier capacity on the east coast. And the most available port to put that in today is in Mayport, and that is where the Navy thinks it should be.

Mr. MORAN. Just a comment. There are a lot of things that would be nice to do if we had sufficient resources; and building more ships for a port that is not currently being used is redundant, is a questionable use of resources.

But I have taken up my time. Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Kingston.

COAST GUARD SHIPS AND MISSIONS

Mr. KINGSTON. Thank you, Mr. Chairman.

Madam Secretary, do you know if the Coast Guard uses any foreign-built ships?

Ms. STILLER. I don't know that. I can find that out and get that for you.

Mr. KINGSTON. I just wondered.

[The information follows:]

No, the United States Coast Guard does not own or operate foreign built boats or ships. They have used foreign patrol boat designs for manufacturing in the United States. They have used only three European designs in the CG, for the 87/110/154. The 87' CPB and the 154' Sentinel Class Patrol Boat are Dutch (DAMEN) and the 110' WPB was British (VT Shipbuilding). It is also important to note that while they used the parent craft approach, the designs all required enhancements

to meet CG requirements, which means that the Detailed Design for each of those three ships was completed in the United States.

Mr. KINGSTON. And, also, do you have any overlap historically with Coast Guard roles and Navy roles closer to shore? As your fleet has gone down, has Coast Guard filled in any gaps closer to home, particularly in the Caribbean?

Admiral MCCULLOUGH. I mean, the Coast Guard has a mission set, sir, in the Caribbean that the Navy doesn't necessarily have; and, as you well know, under their title in the U.S. Federal code, they can execute law enforcement missions where the Navy cannot.

The Coast Guard has augmented Navy forces in defense of the oil platforms in the Northern Arabian Gulf, both Al Basra oil terminal and Khawr al Amaya terminal. And they have augmented our forces there with cutters, and we are most grateful for that augmentation because it would tie up more of our assets to do that.

We assist the Coast Guard or operate in conjunction with the Coast Guard in counternarcotics operations in the Caribbean. Admiral Stavridis asks for ships routinely not only for theater security cooperation in his AO but to help in the counternarcotics mission. We would like to be able to provide more ships to assist in that mission, but, as I said in my oral testimony, because of the current number of ships we have and the demands by all of the Combatant Commanders, we are routinely unable to fill the level of commitment that Admiral Stavridis requests.

Mr. KINGSTON. Is there anything specific that this committee could be of assistance with in terms of that gap?

Admiral MCCULLOUGH. Sir, as has been mentioned many times, the minimum number of ships the Navy needs that we believe to fulfill the maritime strategy is 313 ships.

Mr. KINGSTON. I am speaking specifically where Navy meets Coast Guard on the small overlap that you have.

Admiral MCCULLOUGH. We have a very good relationship with the Coast Guard. We have what we call warfighter talks, which are really operational discussions between the two services and work to best leverage our procurement programs off of each other. The Navy provides the combat systems to Coast Guard ships under Navy-type, Navy-owned systems. So our combat systems and communications capability are compatible with the Coast Guard. I don't think there is anything specifically that the committee could help with in that regard, but I will look at it, and I will provide you feedback, sir.

SHIP DESIGN INDUSTRIAL BASE

Mr. KINGSTON. I think we would all be willing, and I think that would increase the political constituency on the Hill, to help get more ships out there.

Madam Secretary, as the chairman has stated, I am one of the committee members and I think all of us are very interested in this internship program that you have and I applaud you for that. But I am also wondering, beyond procurement, what about design? For example, we hear quite often that America has fallen behind in engineers, particularly as compared to China, which, as Mr. Frelinghuysen has mentioned, appears to be ramping up their sea pres-

ence all over that area. And then there will be other challenges from other countries.

But we hear that India graduates something like 260,000 engineers a year, China 450,000, America about 60,000. But we also know the definition of engineers is different country to country. I know in New York there is the Webb Institute, and I assume 100 percent of their graduates go working for the Navy in terms of ship designing, but I know that is only about 100 graduates of a class a year. I know it is very small. Are you concerned about the number of engineers that we are getting out there in terms of the ability?

And then, aside from the Webb Institute, what other leading colleges or universities are helpful on this? And does the lack of an NROTC program hurt you or help you? In terms of big picture, is that a concern that you have?

Ms. STILLER. No, sir. I would say that we have been actively recruiting to bring engineers into our naval design areas both on the ship side as well as the air side.

As I mentioned in my oral statement, we have atrophied over time the number of government workforce people we had in house. We are reversing that trend. We are bringing folks in.

Likewise, the acquisition intern program that I mentioned, we have engineering interns as well within our systems commands. In fact, I know that the Naval Sea Systems Command is having a job fair next week in this area to attract engineers as well as contract types and budget folks. And what is interesting, I think, and is attractive to a young engineer is the responsibility and the fun work you get to do when you are working in ship design or weapon system design. They are really fun careers to get into. We have had really good success in bringing people.

Mr. KINGSTON. So you don't think we are losing any design or engineering know-how and there are plenty of smart kids that want to take that on?

Ms. STILLER. I would say yes. Although you did mention the Webb Institute, which is a wonderful university that provides us wonderful engineering talent. Over the years, the number of naval architecture degrees that one can get in this country has gone down. I believe Michigan is still available, MIT and Webb and the Naval Academy.

Yes, sir, that has been an area, but there are certainly mechanical engineering and electrical engineering across this country that can provide us with really talented folks.

SOLE SOURCE SUPPLIERS

Mr. KINGSTON. I wanted to ask you one other question, Mr. Chairman, if I have time.

Ms. Kaptur had asked about the sub suppliers, and you said 80 percent of the suppliers of the submarine force are sole source suppliers. Does that worry you in terms of being too reliant on too few industries? And, also, it would appear to me that, over time, if I know I am a sole source supplier, that my prices aren't going to be very elastic.

Ms. STILLER. Yes, sir. That is an area that we watch very, very closely.

In the case of submarines, because we got down to such low levels of procurement—and, in fact, we had a hiatus for a few years back in the late 1980s and early 1990s when we weren't buying submarines, and we had to watch that industrial base very carefully. We do have to watch to make sure that they are going to be available.

As we ramp up over time, there may be an opportunity to bring second sources of supply in; and we will look at that very carefully.

We have sole source issues as well on the surface side. It is not as dramatic because a component across a destroyer may apply to an aircraft carrier. So we have to just watch those as well. But we carefully manage it. We watch when folks merge. If we have mergers and acquisitions, we look at those very carefully, too, to see what that does to us from a competitive perspective.

Mr. KINGSTON. Thank you.

Thank you, Mr. Chairman.

SUPPLEMENTAL SCHEDULE

Mr. MURTHA. Most of the members are here. Let me announce the schedule for the supplemental.

We expect to get the details on the supplemental next Thursday. We think by May 5th, we hope, we will be on the floor. Of course, you can work your way back to full committee on the 30th.

The Defense Subcommittee hearing with General Petraeus, that is on the supplemental. We hope to have it done by Labor Day. Whether it will get done, I don't know. But we are trying.

Now the main bill we hope to finish July 30th for House consideration. It is about the same schedule as last year. And it is a very ambitious schedule, but we stuck to it last year and got it done.

So it gives you an idea of the work we have got to do. We have several hearings. We have had 20 some already. We had several hearings before, and we have some major programs where we don't know where they are. We will get some details or something.

On the base bill, we think we will get the information—May the 4th, the information on details on the main bill.

Okay. All right. Mr. Bishop.

SHIPBUILDING BEST PRACTICES

Mr. BISHOP. Thank you very much, Mr. Chairman; and thank you for your testimony today.

Mr. Frelinghuysen and Mr. Kingston referenced the rising threats that we have sea-wise from China, India, Russia, and Iran. And from what I have been hearing over the past couple of years on the subcommittee, our capacity is becoming less robust and more sedentary in terms of our capacity to do what needs to be done Navy-wise and to have the kinds of ships that we need that the Secretary has indicated is necessary.

With that background, I wonder about our shipbuilding best practices. The GAO released a draft report that said that the Navy shipbuilding practices, in comparison to the commercial shipbuilding practices, is an interesting comparison in contrast and indicates that when commercial shipbuilders get ready to build a ship, the builder and the buyer agree on all aspects of the ship—

the price, the schedule, and performance parameters—before the contract is signed.

It also says in this report that before construction begins that the shipbuilders complete the key design phases that correspond with the three-dimensional product model. It says that key technologies are already known and that the final information on the systems that are going to be installed are required to allow the design work to finish prior to the beginning of construction.

Mr. BISHOP. And then once construction begins, in the commercial sector, they very seldom allow change orders. Now, we have been told that the Navy has learned this lesson, these lessons, over and over and over again, yet seem to not have changed your way of doing business. Do you envision incorporating these best practices into the Navy shipbuilding program, and when?

Ms. STILLER. Yes, sir. I believe we have incorporated a number of those already into our practice. I mentioned in my oral statement we have an acquisition governance process that we have put into place over the last year, and that covers beyond shipbuilding.

But to give you a sense of a shipbuilding program, as the requirements are defined, we have a conversation between the requirements community and the acquisition community on what are the cost drivers going to be? What can we see up front that is going to drive costs? And then we can have the debate does that requirement need to hold?

We continue to have those discussions throughout the program's life cycle. Before we decide to release a request for proposal, we are going to look at the proposal together and make sure we are asking exactly what we want to buy, and that we are promoting competition where we can.

As for the design piece of it, as you know, a lead ship's detail, design and construction funding is provided in a single year. Advance procurement is provided ahead of time mainly for components. What we have been doing, what we have instituted, and I will say, with the exception of LCS, what we have instituted and will continue to institute is: until a design is adequately mature, we are not going to authorize going into production of the ships. I think we are embracing the commercial model there.

With respect to change orders, there is policy that has been given to ship program managers. It was issued originally in 2001 and reiterated in 2006, that tells a program manager there are only five categories of change that he can authorize. These are safety; if something is not available anymore, obsolescence; if you found something in test and trials; there is a contract defect; or there are statutory things passed on to him after the contract has been awarded. That has been remarkably successful. For example, in Virginia Class, we budgeted about 5 percent for the lead submarine, and we spent less than 4 percent in change orders on that submarine.

Mr. BISHOP. Let me just ask you in that regard, you always historically have built in 5 percent for change orders, and that has been historic.

Ms. STILLER. Yes, sir.

Mr. BISHOP. And last year you said that you were going to institute these procedures to reduce it, but you are still projecting 5 percent for change orders.

Ms. STILLER. Well, I would tell you in the follow-up, Virginia, right now we are in the 2 percent or lower range. I think that is quite remarkable.

Mr. BISHOP. But you are budgeting for 5 percent.

Ms. STILLER. Yes, sir, because we have to budget for things like obsolete equipment or a safety item, or if something comes up statutorily later, like an environmental issue that we have to go address, we have to go address that with the change order money. It is not unusual.

I would tell you on the commercial side they do allow change. It is small. But for a warship, we need to also keep pace with the threat. If there is a requirement change later on or something we need to go and enhance, we have to have the ability to do that.

Mr. BISHOP. I am concerned, as Mr. Kingston is concerned, with the capacity. You seem to be comfortable with the fact that we have enough engineers, and your internship program is, you think, very promising in terms of developing contract people to do the estimates and engineers to do the design. But I am not as comfortable as you are. I am concerned.

I am very concerned that with the astronomical number of engineers that China and India are developing compared to the United States, that our capacity is falling way behind. And unless we double our efforts, accelerate our efforts, we will remain behind, and not only in that particular capacity, but also in the best practices, because clearly, you know, we have suffered in best practices. And the Navy is not getting equipment that it says it needs in a timely fashion. And as Ms. Kaptur referenced, our industrial base is slipping. We have got sole-source contracts. And even I am concerned, as Mr. Moran discussed it with the Admiral, the fact that we have only one maintenance port on the east coast. That is frightening to me. I mean, who knows what this new Chinese Navy could do in terms of some kind of terrorist attack that could tie up that port? So I am very concerned about our capacity to defend ourselves and to maintain the mobility of our naval fleet.

Mr. MURTHA. Ms. Granger.

LITTORAL COMBAT SHIP

Ms. GRANGER. Thank you.

I want to return just a minute to the LCS. And we know where the 1 and 2 are. And 3, the contract has been awarded. What do you see as the delivery date for 3? And then what are you anticipating for delivery for 4?

Ms. STILLER. Ma'am, I will get you the exact delivery date in the contract. I cannot remember it. They are notionally a 32- to 36-month build cycle.

[The information follows:]

LCS-3 (Fort Worth) was awarded to Lockheed Martin on March 23, 2009. LCS-4 (Coronado) was awarded to General Dynamics on May 1, 2009. Both ships are expected to deliver in FY 2012.

Ms. GRANGER. Approximately.

Ms. STILLER. About 3 years from now is the delivery plan for LCS-3. And once we sign the contract for 4, it would be about 36-months until delivery.

Ms. GRANGER. And then on the acquisition strategy that you discussed before that you are in the process of, whether you will down select, that will occur as this is going?

Ms. STILLER. We do not anticipate, for the fiscal year 2009 and 2010 ships, that we will make a down select. That will be a decision made further out. Right now the way the contract is structured, there are two ships in 2009 and three in 2010. That is what we have asked for bids for. Presumably there will be one winner that will have three, and the other will have two in those two fiscal years. That is the construct we see right now.

Ms. GRANGER. Thank you.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Hinchey.

GENEAL SHIPBUILDING

Mr. HINCHEY. Thank you, Mr. Chairman. Thank you very much for this very interesting conversation.

With regard to the engineering circumstances here and in other countries, my impression was—and maybe this is not the same anymore—that the engineering requirements for engineering graduates in terms of education and other qualifications in places like China and India were substantially lower than they are here. Do you know about that?

Ms. STILLER. I am not aware of that, sir, but that could be the case.

Mr. HINCHEY. I think that is something that is quite interesting in terms of the engineering abilities of graduates here as opposed to engineering graduates in some other countries. Nevertheless, it is an interesting kind of issue.

The importance about the work of the construction of military vessels, of course, is fundamentally about the national security of the country. But also in the context particularly the circumstances with which we are dealing with now, it has some impact on the economic circumstances, job creation and job maintenance. So I am wondering a little bit more, with some more clarity than at least what I understood, about the leasing and manufacturing of military vessels in other parts of the country. The leasing is now down to what, 20 did you say?

Ms. STILLER. We currently have 26 ships under lease. Of those, 14 are foreign built.

Mr. HINCHEY. And that leasing is going to continue to decline?

Ms. STILLER. That is our goal. We work with Military Sealift Command and U.S. Transportation Command to say, what do you really need to transport by sea? How much of that has to be on leased vessels versus ships that we own? So there is a constant dialogue.

Mr. HINCHEY. Is there manufacturing of naval vessels that goes on currently in other parts of the world?

Ms. STILLER. Not for U.S. Navy, no, sir. All of our construction is done in the U.S.

Mr. HINCHEY. Okay. Good.

The LCS that was just talked about, I understand that Lockheed Martin has been having apparently more success in developing their element of the contract than other corporations. Is that true?

Ms. STILLER. I would tell you that in the case of LCS, Lockheed Martin delivered the lead ship. They won the first of the two. So they are a bit ahead from General Dynamics. I would not tell you that they are doing any better or any worse than each other. They have totally different designed ships. LCS-2 is just behind LCS-1 because it was awarded a year later.

Mr. HINCHEY. So these are two different vessels that are being—

Ms. STILLER. Yes, sir. Two different vessels that meet the same set of requirements.

Mr. HINCHEY. What is the difference in the vessels?

Ms. STILLER. LCS-1 is a monohull steel ship. LCS-2 is a trimaran aluminum ship.

Admiral MCCULLOUGH. Just for comparison, the beam on LCS-2 is about 103 feet, 7 inches, or 4 inches. On LCS-1 it is on the order of 58 or 60 feet. The displacement of both vessels is relatively the same, on the order of 2,900 tons. The crewing for—core crew for an LCS is 40 folks, with 15 to run the mission module and 20 to run the aviation deck. So the crew totals 75.

Mr. HINCHEY. I am asked what do you mean by displacement?

Admiral MCCULLOUGH. It is the amount of water the ship displaces in tons to float. So people equate it to weight. It is not really the weight, but it is how much water the ship pushes out to float.

GUIDED MISSILE DESTROYERS

Mr. HINCHEY. Okay. Thanks very much.

I just wanted to ask a question about the destroyer issue, DDG-51 and the 1000. The more sophisticated destroyer apparently, the 1000, is something that is in a new element of development now?

Ms. STILLER. DDG-1000 has been a program of record for about 10 years now. We did engineering development models for DDG-1000 to prove out technology that we felt was high risk. We have come through all the testing, with the exception of the volume search radar and the testing that is to go on that we will complete by the end of this calendar year. We started fabrication. We have completed 85 percent of the design for DDG-1000, and started fabrication of the lead ship in February.

For the differences in the missions, I will defer to Admiral McCullough.

Admiral MCCULLOUGH. DDG-1000 was designed to operate in the littoral. It has a relatively low-radar cross-section and other signature-reduction capabilities. It has 80 missile cells in it. And we are doing some work to modify the missiles so they can communicate with the ship, and some modifications to the ship so it can communicate with the missiles to give it a limited area anti-air warfare capability. It has no ballistic missile defense capability as currently built.

The DDG-51s that we will restart, hopefully, have ballistic missile defense capability in stride, so they can shoot the SM-3 missiles that we have demonstrated both against targets, and then last summer against an aberrant satellite. It has anti-air warfare capa-

bility, it is less stealthy, and it has better open-ocean anti-submarine warfare capability.

DDG-1000 is a great program. It is performing to schedule and cost, and it is going to deliver the capability that we asked for at the time we developed the ship. That said, the world has changed. We need a different capability set.

Mr. HINCHEY. No question.

How many military personnel are normally on the DDG-1000?

Admiral MCCULLOUGH. The DDG-1000's core crew is about 120 folks.

Mr. HINCHEY. Thanks very much.

Mr. MURTHA. Ms. Kilpatrick.

SHIP ACQUISITION

Ms. KILPATRICK. Thank you, Mr. Chairman.

Good morning, Admiral. Recently I traveled to Washington State with Chairman Dicks and had an opportunity to actually get on the aircraft carrier USS ABRAHAM LINCOLN as they were commissioning it and celebrating his 200th. Quite an experience. My father is a World War II Navy man, so I have heard of them all my life, and I finally set foot on one. It was an awesome experience. We also visited I think it was the USS NEW HAMPSHIRE was a Trident submarine, and actually saw the weapons, which was also something.

I am concerned, too, as some of the talk has been this morning, and thank you for your service and your intelligence on your area that you do. If our colleagues could hear some of what you say, they would not attack our budget so much, but they do. It is a lack of not knowing, really. I know you have quadrennials coming up. I understand with our allies, Canada, U.S., Australia, there is a quarterly meeting somewhere here in the U.S. this spring. When and where is that?

Ms. STILLER. That meeting is between me and my counterparts from those countries to talk about acquisition issues. They are coming in the first week of May, and we are going to talk about general acquisition issues. We have been talking about what their plans are for buying, when are they buying their submarines and their destroyers, and when are we buying ours, to see if we are going to put a demand signal out to the worldwide supplier base.

Ms. KILPATRICK. Are those meetings in Washington?

Ms. STILLER. This particular one will be in Washington, yes, ma'am.

Ms. KILPATRICK. And we did have five shipbuilding companies; now we have two. Is that a result of our not moving forward as a result of our needs? What is that?

Ms. STILLER. We still have the six shipbuilding sites, but you are right, they are owned by two corporations now. And that has been over the last 10 years, where we have seen mergers and consolidations across the defense industrial base. But, yes, we do have two corporations that own the six sites where the majority of our large warships are built.

AMPHIBIOUS LIFT REQUIREMENTS

Ms. KILPATRICK. Admiral, with that said, and also this morning I understand the brigade requires 38, and we have 33—it is in my notes somewhere—I want to say partners on a brigade. I know we are operating under the requirement. You must feel it is enough. We have less ships than we need. Our adversaries not yet, but maybe in this world, Canada—excuse me, not Canada, that is my neighbor—China, India, have more engineers. Should we be worried? And you always say you build to the right ends and all that, but talk to me for real.

Admiral MCCULLOUGH. I think you are talking about amphibious lift when you talk about 38 ships.

Ms. KILPATRICK. That is it. Is it comparable to brigades?

Admiral MCCULLOUGH. Yes, ma'am. The 38 ships is necessary, given an operational availability of about .885, to give us 34 available ships to lift the assault echelon of two Marine Expeditionary Brigades. We have taken some risk in that with the agreement to build 33 ships—the 11 aviation capable, the 11 LPD and the 11 LSDs—that give us about 30 operationally available. That means that when we look at the assault echelon, some combat service and combat service support equipment will be required to be delivered in a follow-on echelon, but we think that is acceptable risk.

The Marine Corps fights as a Marine Expeditionary Force, which is three Marine Expeditionary Brigades. So once the invasion commences, you need an additional Marine Expeditionary Brigade as a follow-on echelon. But the Commandant of the Marine Corps and the Chief of Naval Operations have agreed to the 33 number as an acceptable level of risk to conduct a joint forcible entry operation.

Ms. KILPATRICK. So you have asked your superiors. They have all said that that is enough; you all feel that we meet our needs in that regard.

Admiral MCCULLOUGH. Yes, ma'am, that is correct.

Ms. KILPATRICK. Thank you.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Rothman.

Mr. ROTHMAN. No, thank you.

DDG-51 ADVANCE PROCUREMENT

Mr. MURTHA. I just want a couple of points of clarification. On the 51, we put \$200 million towards advance procurements. Is that money obligated, or are you just looking at it, or what are you doing?

Ms. STILLER. Sir, we have obligated a portion of that money, and we have plans to obligate the rest of it as we go through the next calendar year. We are trying to buy when we need the components.

LITTORAL COMBAT SHIP

Mr. MURTHA. And the LCS, clarify for me what happens here. We are going to buy 55 of them at least. That is what you project. Do we buy half and half? Do we buy one that is cheaper? What is the projection here?

Admiral MCCULLOUGH. We are still doing an assessment, Mr. Chairman. I mean, just from touring both the ships, I will tell you

that LCS-1 will probably launch and recover remotely-operated vehicles better than LCS-2, and that is just from looking at it. The aviation capability, due to the beam on LCS-2, will probably be looked at more favorably just because of the sheer size of it. And so what we really have to do is operate both of the ships, see how they perform to see if we—and then look at acquisition cost and life cycle costs to see if we should down select the one or we should build 27, essentially, of each type. And we will be working through that over the next couple years as we get these two ships in the water and get them to sea and operate them.

Mr. MURTHA. I was just out to—and I know this is not your field, but we talked earlier about PTSD, and this committee added \$900 million for PTSD. And I was just out to Bethesda, and they have a new wing. And they do not have as many casualties that have just come in, but they have a lot of people who are coming back with that. One was a blinded captain, West Point graduate, who was coming back because he had to take the titanium cap off his head. Another one had all kinds of pain for 2 years.

So the money is filtering out finally, as it does, except we have made some big decisions. We have been right, for instance, on the past sealift ships, roll-on/roll-off ships. I can remember them. The Navy fought it because they were Army ships, and the Navy did not want to pay for them. And then the Assistant Secretary came before the committee and said, and we did this and we did that. I said, no, no, wait a minute, hold up here.

But at any rate, we want to work with you, and the reason it is so important we get as many facts as we can. And I know you are limited because you do not know exactly what you are going to have. This subcommittee has operated in a bipartisan manner, as you know, with Bill Young, Jerry Lewis continually. So we continue to hopefully be able to do that. But we need to know from you. And I appreciate your testimony. And one of the staff said, we built 2,700 Liberty ships in World War II. Well, we are lucky to build—what are we going to build this year, 10? If we help you, you will build 10, right?

Admiral MCCULLOUGH. I would love to have 10 ships in 10 months, Mr. Chairman.

Mr. MURTHA. Mr. Frelinghuysen.

NUCLEAR POWER

Mr. FRELINGHUYSEN. Just one other question. When we talk about the nuclear Navy, obviously we are talking about our sub fleet, and we are talking about our carriers. You know, there is talk of other surface ships being nuclear powered. Could you make just a few comments on that? I think this is a legitimate question.

Admiral MCCULLOUGH. National Defense Authorization Act of 2008 directed that surface combatants or ships that function with carrier striking groups or striking forces in the Navy be nuclear powered unless the Secretary of Defense testified before Congress that it was not in the best interests of the country to do so. So as we go through the design of the follow-on cruiser, we are looking at nuclear power as an alternative for that ship. It adds up-front acquisition costs. It gives operational flexibility.

I am a surface nuke, and I have served in aircraft carriers and in nuclear-powered cruisers when we used to have those. I would tell you that from an economic standpoint, it starts to make sense when the energy demand on the ship requires an energy density that you would see if you had a ship service distribution load of about 78 megawatts. And as we go through the requirements for cruisers, if you believe you need a very high-sensitivity, large phased-array radar, we could see the power requirements pointing us in that direction if that is the path that the AOA dictates, sir.

Mr. FRELINGHUYSEN. The military is the largest consumer of fuel in the world, and I do think it is worthy, if we are taking a look at the future, nuclear-powered surface ships. I am glad you are doing it. I think it is certainly entirely reasonable. Thank you.

Thank you, Mr. Chairman.

Mr. MURTHA. Thank you very much.

The Committee adjourns until 10:00 a.m. tomorrow.

Admiral McCULLOUGH. Thank you, Mr. Chairman.

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

LITTORAL COMBAT SHIP (LCS)

Question. I understand that the LCS mine warfare systems being developed are overweight. What is the Navy doing to address those problems so that the LCS can have this critical capability? Will this require additional funds?

Response. The LCS Seaframes are required to carry a Mission Package (MP) payload. The minimum Mission Package payload weight that the LCS seaframe must accommodate is specified at 180 metric tons (MT) and the maximum objective payload weight is specified at 210MT. This has imposed a maximum limit on embarkable MP weight of 180MT, until the ships are deemed capable to carry more. This MP weight includes the mission modules, crew detachments, aircraft, ordnance and all offboard vehicle fuel.

As planned, early Mine Countermeasures (MCM) MPs will not have the full complement of Spiral Alpha capability Mission Systems and support equipment but will add MCM systems incrementally as they complete development. These Mission Packages are within the ship's payload weight requirements and will not exceed the 180MT weight limit.

The Spiral Alpha MCM MPs will have a full complement of mission systems and support equipment. Spiral Alpha MCM MPs initially had an estimated weight that was 16MT over the weight limit. The LCS Mission Modules program office (PMS 420) has made significant progress in reducing the weight of the Spiral Alpha MCM MP. The excess weight has been reduced to about 5.1MT. Current work is estimated to reduce Spiral Alpha MCM MP weight by an additional 7.5MT, bringing the MP within the allowable weight limit. The activity to reduce the weight, currently projected for future packages, includes restowing equipment and systems to improve the weight efficiency of containers and stowage systems. This also includes investigations of alternate lightweight materials (aluminum and composites) and improved designs with more efficient structure to hold equipment.

The MCM MP components that provide the mission performance are not required to be changed for the purpose of reducing weight, but as prototype and engineering development systems are matured for serial production, there may be opportunities to achieve further weight reductions. PMS 420 will work with partner mission system providers to maintain a weight saving focus.

At this time, no additional funds are required.

Question. Why is every ship in the Navy not equipped with Degaussing capability?

Response. Ships are equipped with degaussing systems based on policy (OPNAVINST S8950.2) and requirements analysis. All surface combatants, except the aluminum hull LCS variant, amphibious ships and aircraft carriers have degaussing systems. Some non-combatant ships under the responsibility of the Military Sealift Command also have degaussing systems (e.g. T-AKE).

Question. Is the Navy still committed to the LCS program from a requirements standpoint?

Response. Yes. The Littoral Combat Ship (LCS) remains a program of critical importance to Navy, and continues to be monitored closely. LCS fills compelling and consistent warfighting capability gaps in littoral mine countermeasures, surface warfare, and anti-submarine warfare. The requirement to gain, sustain, and exploit littoral maritime superiority to ensure access and enhance the success of future joint operations remains unchanged. The 55-ship LCS program is an essential component of the long range shipbuilding program and achieving the Navy force structure objective of at least 313 ships.

[CLERK'S NOTE.—End of questions submitted by Mr. Boyd. Questions submitted by Mr. Murtha and the questions thereto follow:]

LITTORAL COMBAT SHIP (LCS)

Question. The Navy's Littoral Combat Ship (LCS) is envisioned as a 55 ship class that will conduct multiple missions in the littorals. When complete, this ship class will represent nearly 20 percent of the 313 ship fleet. The ships have been troubled since the program's inception, due to cost growth and technical issues. The contract for the third ship was awarded last week to Lockheed Martin. Contract negotiations for the fourth ship (which will be built by General Dynamics in Mobile, Alabama) are ongoing.

Secretary Stiller, the Navy has accepted delivery of the first LCS variant built by Lockheed Martin, but is still waiting on delivery of the second LCS variant built by General Dynamics. What is your estimate of when this ship will complete sea trials and be delivered to the Navy? What has been the biggest cause of delay for this ship?

Response. INDEPENDENCE is 88% complete and is expected to deliver in 2009, with Builder's Trials and Acceptance Trials to complete prior to ship delivery.

Root causes for continued schedule extensions and cost growth are varied. Some are well publicized, with little room for recovery and continue to impact the program:

- Unrealistic Estimates for Material and Labor
- Concurrency of Design and Construction
 - Naval Vessel Rules
 - Inadequate Production Plan at the Start of Construction
- Insufficient Modular Construction and Pre-outfitting
- Delays to First Article Testing with Subcontractors

Other root causes were correctable and action plans were developed and executed to stem the negative program impacts:

- Under-staffed Government Program Management/Supervisor of Shipbuilding
 - Slow Recognition of Cost and Schedule Growth
- Over-emphasis on Schedule
 - Compounded by a lack of Advanced Procurement

In response, the Navy and Industry team have bolstered the waterfront organizations with key and experienced shipbuilders and developed leading performance indicators that highlight problem areas. Through daily assessments, weekly analysis of key metrics on production and test progress, and monthly progress and cost reviews, the Navy and Industry team managers identify variances quickly and ensure that corrective actions are implemented and effective. Cost and schedule performance has improved.

In this latter stage of ship production and testing of a new design, root causes tend to lie in technical problems encountered on a daily basis and in this case are compounded by immature shipbuilder processes to solve the issues in support of scheduled work activity. Delays associated with technical issues, combined with the low levels of pre-outfitting at the module stage prior to launch, drive rework, out-of-sequence work, and inefficiency.

Question. Secretary Stiller, the Committee understands that the Navy has awarded a contract to Lockheed Martin for construction of the third LCS. When do you anticipate the Navy will award the contract to General Dynamics for the fourth LCS?

Response. General Dynamics—Bath Iron Works (BTW) was awarded a contract on May 1, 2009, for LCS FY09 Flight 0+ ship construction, class design services, configuration management services, additional crew and shore support, special studies and post delivery support. This award represents Phase I of a competitive two-phased acquisition approach to procure FY09/FY10 LCS, with Phase II including potential award of up to three (3) additional LCS Flight 0+ Class ships.

Question. Secretary Stiller, the LCS program will be subject to a \$460 million cost cap starting in fiscal year 2010. Do you envision being able to award the fiscal year 2010 ships at a value that will meet the requirements of the cost cap or will the Navy have to ask for some relief?

Response. Navy is actively engaged with industry to implement cost reductions with the intent to procure the FY10 ships within the \$460M cost cap. Legislative relief may be required regarding the LCS cost-cap until manufacturing efficiencies can be achieved.

The Navy has formalized a LCS program affordability and cost reduction effort. This effort primarily targets cost drivers in shipbuilder design, Navy specifications, and program management costs. Cost reduction opportunities that have potential to impact Warfighting requirements are evaluated by OPNAV.

Question. Admiral McCullough, do you envision the Navy down selecting to a single variant of LCS or do you believe both variants will continue to be constructed to fill out the ship class? When will an acquisition strategy be finalized?

Response. A draft acquisition strategy for FY 2011 and out-year ships is under review within the Department of the Navy. It is anticipated that starting in FY 2011, the Navy will lay the foundation for a bridge to Multi-Year Procurement (MYP) of LCSs by exploring a block buy or a contract with options to leverage economic ordering and provide stability for shipyard workload and planning. The strategy will address methods to utilize competition to improve affordability through efficient production rates, facilities and process improvements, advanced procurement to take advantage of Economic Order Quantity (EOQ) buys, system commonality, and an evaluation of Government versus Contractor furnished material in the combat systems and communication suites and decision points for potential capability upgrades. This draft strategy will be briefed to the new USD (AT&L) for review and approval.

The updated acquisition strategy will also incorporate the results of operational test and evaluation, Fleet feedback on ship performance and shipbuilder cost performance. The Navy intends to proceed with both variants of the LCS for now and plans to use competition as a tool to drive costs lower. During this period, the Navy is investigating commonality opportunities. If the Navy decides to select only one sea frame for Flight 1 construction, it will continue to use competition to obtain best pricing.

DDG-1000 GUIDED MISSILE DESTROYER

Question. Last year, the DDG-1000 Zumwalt Class guided missile destroyer finalized contracts for the two lead ships of the class. The two shipyards that will construct the ships are Bath Iron Works in Maine (General Dynamics) and Ingalls Shipbuilding in Mississippi (Northrop Grumman). The contracts were awarded with 55 percent of the final design complete. Approval was recently granted to Bath Iron Works to begin fabrication of the first ship.

Secretary Stiller, although the Navy has signed the construction contracts for the first two ships of the DDG-1000 class, in reality those contracts only account for about half the cost of the ship. The remainder will be consumed by government furnished equipment which depends largely on the development of several new technologies that will be introduced on the DDG-100 platform. Are you comfortable that the development of these technologies is sufficiently mature; that they will not hold up construction or contribute to cost growth?

Response. Yes. Maturity of the key DDG-1000 developmental systems began in the Technology Demonstration Phase with the successful development and test of ten Engineering Development Models. Subsequent to a program level Critical Design Review in September 2005, a Milestone B Technology Readiness Assessment (TRA) was conducted by an independent panel chaired by the Chief of Naval Research (CNR). A subsequent TRA review is conducted annually, and after each software release.

The DDG-1000 Zumwalt Class Destroyer Total Ship System (TSS) Production Readiness Review (PRR) was successfully conducted on October 28, 2008. As a lead up to the review, all of individual systems went through production readiness reviews and the TSS PRR assessed the collective production readiness of the entire system to proceed into production. The results of the review were documented in a Report to Congress.

All technologies will achieve the Technology Readiness Level (TRL) of 6 (system demonstration in a relevant environment) or better by ship installation. The Total Ship Computing Environment (TSCE) will achieve TRL 6 upon completion of the Software Release 5 System Acceptance Test and Software Certification Panel in FY10.

Question. Secretary Stiller, how confident are you in the ability of the DDG-1000 contractors to deliver these two new lead ships for the contracted price when fabrication of the first ship began before the final design was complete? How much of the design is now complete?

Response. The detail design of the ship was, in fact, more complete than any previous surface combatant built to date. Before any construction zone on the ship starts production, the detail design for that particular zone is fully completed. At the start of construction in February 2009, over 80% of the detail design was complete. Over 85% of the detail design is now complete. 2D extracted drawings (shop floor production drawings) have been issued for 20% of the ship.

Contractor cost and schedule performance for the DDG-1000 program, as measured by the Earned Value Management System (EVMS) are very good high performance indices, low variances, and stable trends on all contracts. Contracts are currently executing near target for both cost and schedule. Following a successful Total Ship System Production Readiness Review was conducted October 2008, SECNAV submitted a report to Congress certifying readiness to start production in February 2009.

Question. Secretary Stiller, when do you expect fabrication of the second ship to begin?

Response. DDG-1001 was anticipated to start fabrication at Northrop Grumman Shipbuilding (NGSB) during Fall 2009. A new start fab date will be determined during contract negotiations between General Dynamics Bath Iron Works (BIW) and NGSB for the proposed workload swap of DDG-1000 and DDG-51 construction. The plan aligns construction responsibilities for FY09 and prior DDG-1000 Class ships and selected DDG-51 Class ships between BIW and NGSB through the order of the next three planned DDG-51s to ensure shipyard workload stability at both yards, leverage learning, stabilize and minimize cost risk for the DDG-1000 program, efficiently re-start DDG-51 construction, facilitate performance improvement opportunities at both shipyards, and maintain two sources of supply for future Navy surface combatant shipbuilding programs.

This plan is in keeping with Secretary Gates' statement during April 6, 2009 press conference where he stated that the Department's FY10 plans depend on being able to work out contracts to allow the Navy to efficiently build all three DDG-1000 class ships at BIW in Maine and to smoothly restart the DDG-51 class construction at NGSB Ingalls shipyard in Mississippi.

Question. Secretary Stiller, what is the status of the third DDG-1000? Has the Navy started contract negotiations? When do you expect the contract for construction of the third ship to award?

Response. DDG-1002 has been partially funded by Congress and the balance of funding was requested in the President's FY10 budget. The Navy, with General Dynamics Bath Iron Works (BIW), and NGSB have reached an agreement for workload swap of DDG-1000 and DDG-51 construction. DDG-1001 was anticipated to start fabrication at Northrop Grumman Shipbuilding (NGSB) during Fall 2009. A new start fab date will be determined during contract negotiations. Similarly, the contract award for DDG-1002 is part of those ongoing negotiations.

The plan aligns construction responsibilities for FY09 and prior DDG-1000 Class ships and selected DDG-51 Class ships between BIW and NGSB through the order of the next three planned DDG-51s in order to ensure shipyard workload stability at both yards, leverage learning, stabilize and minimize cost risk for the DDG-1000 program, efficiently re-start DDG-51 construction, facilitate performance improvement opportunities at both shipyards, and maintain two sources of supply for future Navy surface combatant shipbuilding programs.

This plan is in keeping with Secretary Gates' statement during April 6, 2009 press conference where he stated that the Department's FY10 plans depend on being able to work out contracts to allow the Navy to efficiently build all three DDG-1000 class ships at BIW in Maine and to smoothly restart the DDG-51 class construction at NGSB Ingalls shipyard in Mississippi.

Question. The number of required DDG-1000 ships has recently fluctuated between two, three, and seven. How many DDG-1000 ships is the Navy planning to buy?

Response. Navy is building three DDG-1000 ships. The first two ships were appropriated in FY 2007, and split funded in FY 2007 and FY 2008. The third ship was appropriated in FY 2009. The FY 2010 President's Budget Submittal requests the second installment of split funding for the balance of the third DDG-1000.

Question. With all of the money invested in development of the technologies for the DDG-1000 program, it seems wasteful to not construct more than three ships of the class. Can the DDG-1000 technologies be used on other platforms?

Response. DDG-1000 technologies can be used on other platforms. The 10 critical technology advancements associated with DDG-1000 are:

- Infrared Mockups (IR)
- Integrated Deckhouse and Apertures (IDHA)
- Dual Band Radar (DBR)
- Integrated Power System (IPS)
- Autonomic Fire Suppression System (AFSS)
- Total Ship Computing Environment (TSCE)
- Advanced Gun System (AGS)
- **Peripheral Vertical Launch System (PVLS)/Advanced VLS**
 - Integrated Undersea Warfare (IUSW)
- **Hull Form Scale Model**

Eight of the ten critical technologies listed above could have application to future combatants. The AGS is being considered in the Joint Fires Analysis of Alternatives. The DBR will be installed in CVN 78.

In addition, technologies such as AFSS and TSCE will have utility for incorporation in future surface ship and carrier designs. Navy has learned a great deal from DDG-1000 research and development and will continue to insert proven technologies in future ship designs wherever appropriate.

DDG-51 DESTROYER PROGRAM

Question. The Navy is completing construction of the initial 62 ships in the DDG-51 program. Last year, the Committee provided \$200 million to the Navy to re-start the DDG-51 production line and continue DDG-51 procurement.

Secretary Stiller, what is the status of the DDG-51 funding that the Committee provided to the Navy last year to assist in re-starting the DDG-51 production line?

Response. Congress appropriated \$200M of FY09 Advanced Procurement (AP) funding to preserve the option to restart the DDG-51 class program. The Navy has obligated \$10.9M of FY09 AP, and plans to obligate the remaining \$188.7M in June 2009. In addition, the Navy plans to reprogram an additional \$128.6M in AP to procure long lead items including Main Reduction Gears and Class Standard Equipment.

To date, for the DDG-51 re-start, the Navy has obligated \$10.9M for the following:

- \$5.0M for shipbuilder Advance Planning
- \$1.6M for Identify Friend or Foe (IFF) (OE-120A Antenna)
- \$3.3M for Exterior Communications High Frequency Radio Group (EXCOMM HFRG)
- \$1.0M for TOMAHAWK

Question. Secretary Stiller, since the Committee provided the initial funding for continuing DDG-51 production, do you have a good estimate for the total cost of re-starting DDG-51 production?

Response. The cost to restart DDG-51 production includes increases in basic construction and Government Furnished Equipment. The basic construction restart costs include the loss of learning associated with a production gap, and cost for new suppliers associated with purchase specification material primarily driven by Main Reduction Gear. The GFE restart costs include production start up, obsolescence, and vendor requalification's. The table below summarizes the production restart issues associated with basic construction and GFE vendors.

Production restart	Vendor	Issue
Shipbuilder (Purchase Specification Material) ...	Various	New suppliers, production line restart.
Main Reduction Gears	Philadelphia Gear	Production line restart.
AEGIS Fire Control System Director/Controller (MK 82/MK200).	General Dynamics	Production line restart.
MK 41 Vertical Launch System (VLS)	Lockheed Martin	Restart of production line for mechanical equipment.
MK 45 Gun Weapon System	BAE Systems & McNally Industries.	Restart production line for weathershields, loader drums, and ammunition hoists.
Surface Bessel Torpedo Tubes (SVTT)	BAE Systems	Restart production line.
SPS-67 Surface Search Radar System	DRS & EDO/AIL	Production line restart and new contracts required for below deck equipment and antennas.

Production restart	Vendor	Issue
Tactical Tomahawk Weapon Control System (TTWCS).	Lockheed Martin	Production line closed. Requires new competitive award.

The costs to restart DDG-51 production will be determined upon the conclusion of negotiations for a detail design and construction contract for DDG-113 and fellow ships. The completion of those negotiations is subject to negotiations that would shift DDG workload between General Dynamics—Bath Iron Works (BIW) and Northrop Grumman Shipbuilding (NGSB).

This plan is in keeping with Secretary Gates' statement during April 6, 2009 press conference where he stated that the Department's FY 2010 plans depend on being able to work out contracts to allow Navy to efficiently build all three DDG-1000 class ships at BIW in Maine and to smoothly restart the DDG-51 class construction at NGSB Ingalls shipyard in Mississippi.

Question. Secretary Stiller, what is your estimate for how much the next DDG-51 ship would cost, considering the fact that there has been a break in production?

Response. The total estimate for the next DDG (DDG-113) is \$2.24 billion and is reflected in the FY 2010 President's Budget. This estimate includes associated production and start up costs, and reflects Navy transfer/reprogramming of \$129 million SCN, currently in process.

Question. Admiral McCullough, has the Navy finalized its strategy for how many "cookie cutter" DDG-51s it plans to procure? Is the Navy planning on moving to upgraded DDG-51 ships once the production line becomes active again? What type of upgrades will be placed on the ships?

Response. The DDG-51 class of destroyer has been built with the incorporation of improvements into the design of the class that have resulted in three different groups or "Flights" within the class. These groups are Flight I, Flight II, and Flight IIA. The Flight IIA ships incorporate a helicopter hangar, for example, while the previous flights do not. The FY10 budget request includes the restart of the DDG-51 class with the procurement of one ship. With the re-start of the DDG-51 production line, greater commonality with the last ships produced will reduce redesign costs and aid in mitigating re-start costs. Currently, upgrades are only being considered to enhance Integrated Air and Missile Defense (IAMD) and Anti-Submarine Warfare.

FUTURE SURFACE COMBATANT

Question. In the wake of last year's announcement by the Navy to curtail the DDG-1000 procurement at three ships and restart DDG-51 production, the media has reported that a ship called the "future surface combatant" has entered the Navy budget. There has been little definition regarding this program.

Secretary Stiller, the media has reported the Navy is considering funding a platform called the "future surface combatant" in future years. Can you briefly explain the concept behind this ship?

Response. The Navy is building three DDG-1000's and the FY 2010 President's budget request includes the re-start of the DDG-51 class with the procurement of one ship in FY10. The Navy plans to continue to modernize and build guided missile destroyers with the best available Integrated Air and Missile Defense (IAMD) capability. The technologies that are in the DDG-1000 and the DDG-51 classes will help us inform and better approach future combatant designs. The Department of Defense's Quadrennial Defense Review will drive the Future Years Defense Program and the Annual Long-range Plan for Construction of Naval Vessels which are currently pre-decisional and planned to be discussed upon release of PB11.

Question. Secretary Stiller, do you envision this platform as a hybrid between the DDG-1000 and DDG-51 programs?

Response. The Navy is planning on building more guided missile destroyers that will be capable of supporting the best available Integrated Air and Missile Defense (IAMD) and ASW capabilities. The Navy is considering options to equip DDG-51 ships with advanced radar with increased capability against advanced air and ballistic missile threats. Concepts under consideration include changes to the DDG-51's engineering plant and hull required to support this advanced radar. The Navy is also considering how to leverage technology inherent in DDG-1000. The technologies that are in the DDG-1000 and improvements to the DDG-51 class will help us inform and better approach future combatant designs. The Department of Defense's Quadrennial Defense Review will drive the Navy Future Years Defense Plan

and the Annual Long-range Plan for Construction of Naval Vessels which is being developed now for submission with the President's FY11 Budget Submission.

Question. Secretary Stiller, what is the basis of cost for the future surface combatant?

Response. In April 2009, the Navy announced that it arrived at a plan that most affordably meets the requirements for Navy surface combatants, commences the transition to improved missile defense capability in new construction, and provides significant stability for the industrial base.

The basis of cost for the future surface combatant has not yet been determined, pending a decision on the capabilities that will be added to future guided missile destroyers for improved Integrated Air and Missile Defense.

USD AT&L directed a baseline study that will compare capabilities, cost and technical feasibility of a range of radar systems for DDGs. This study will be completed in time to inform the President's Budget for 2011.

Question. Admiral McCullough, what requirement is the future surface combatant expected to fill?

Response. When the Navy submitted the plan to truncate DDG-1000 at three ships and re-start the DDG-51 line to the Office of the Secretary of Defense, we called all the ships in the re-start profile DDG-51s. The plan was to restart the DDG 51 line in FY 2010, and study what future capability to put in the ships from FY 2012 and out before we made a decision on what those ships were going to be.

The re-start of the DDG-51 line will fill increasing Combatant Commander demand for Integrated Air and Missile Defense (IAMD) capability and capacity. Navy plans to continue to modernize and build guided missile destroyers with the best available IAMD capability to incrementally fill the Joint Requirements Oversight Council (JROC) approved IAMD capability gaps identified in the Maritime Air and Missile Defense of the Joint Force (MAMDJF) Initial Capability Document (ICD). The plan includes the introduction of advanced radar which will have increased capability over the current SPY-1 radar. This will enable Navy to better address IAMD capability gaps well into the 21st Century.

SURFACE COMBATANT OPEN ARCHITECTURE COMBAT SYSTEMS

Question. The combat system of the Virginia Class submarine has been extremely successful in that it is built on open architecture concepts that can be quickly upgraded to take advantage of technology advancement as the ship ages. The Navy calls this concept "Acoustic Rapid COTS (commercial-off-the-shelf) Insertion (ARCI)". This philosophy has several advantages including cost, capability, and ease of modernizing.

Secretary Stiller, the combat system of the Virginia Class submarine program has been successful largely due to the concept of Acoustic Rapid COTS Insertion. Does the Navy have a similar open architecture concept for the combat systems on surface combatants?

Response. The Surface Navy does have an open architecture strategy similar to the Acoustic Rapid COTS Insertion (ARCI). The Surface Navy is modernizing the in-service Fleet while developing the componentized combat system through incorporation of Advanced Capability Builds (ACB)/Technology Insertion (TI). Similar to the submarine ARCI approach, the Surface Navy modernization efforts uses commercial computer hardware refreshed on a defined TI cycle while the ACB software upgrade introduces maintenance updates and new war fighting capability improvements to pace the threat.

The National Defense Authorization Act for Fiscal Year 2008, Report 110-77 of June 5, 2007, Committee on Armed Services, United States Senate, Page 272-273 requires quarterly reporting of the Navy's approach to developing open architecture concepts for surface combat systems. The sixth report was signed and provided to the appropriate Senate offices on May 11, 2009.

The Navy accomplished two significant Open Architecture milestones: the fielding of the Ship Self Defense System (SSDS) OA with USS NIMITZ (CVN 68) in October 2008 and the modernization of an Aegis combat system on USS BUNKER HILL (CG 52), in February 2009. The NIMITZ's installation extends openness by implementing an open-standard middleware, and adds Information Assurance controls. After a successful electronics light-off in October 2008, NIMITZ completed Combat Systems Ships Qualification Trials (CSSQT) in February 2009. SSDS MK2 fulfills combat management functions across multiple ship types with existing combat system elements while providing added flexibility to accommodate future changes through a modular design approach. The BUNKER HILL achieved successful combat systems light-off with a decoupled (hardware from software) Combat Management System (CMS) and is currently conducting its CSSQT.

The Surface Navy will continue to modularize and componentize its combat systems software as it transitions to an objective architecture-based combat system with a government-defined architecture and government validated interfaces. The ACB process allows capability development to proceed without impacting ship schedules until the capability is sufficiently mature for transition to Fleet use in a methodical integration, test, certification, and fielding approach. The plan is to install ACB software builds every two years and hardware TIs every four years. By 2016, all 22 CGs will be modernized using OA principles and 62 DDGs will be modernized by 2025.

Question. Secretary Stiller, the Navy's largest surface combatant ship class today is the DDG-51 class which is currently operating the AEGIS combat system which is proprietary to the contractor. Does the Navy plan on backfitting the DDG-51 class with a non-proprietary open architecture combat system?

Response. Aegis Advanced Capability Build FY12 (ACB-12) and Technology Insertion FY12 (TI-12) will be executed as part of the Aegis Modernization program and initially targets the oldest DDG-51 Class ships with modernization availabilities beginning in FY12. ACB-12/TI-12 is the first step in providing the entire DDG-51 Class with a non-proprietary open architecture combat system. In addition, ACB-12 will be introduced on DDG-113 in forward fit to ensure all backfit and new construction ships are aligned.

ACB-12/TI-12 will provide enhanced warfighting improvements including Air Defense and Undersea Warfare (USW) capabilities. Significant capabilities include the integration of Naval Integrated Fire Control—Counter Air (WC-CA), Standard Missile-6 (SM-6), AN/SQQ89A(V)15 USW Suite, Joint Track Management (JTM) Alignment, Common Display System (CDS), Common Processor System (CPS), Aegis Ballistic Missile Defense (BMD) and the Multi-Mission Signal Processor (MMSP). In addition, the open architecture AN/SQQ-89A(V)15 Under Sea Warfare (USW) Suite is already being installed on the DDG-51 Flight IIA ships.

Follow-on ACBs, starting with ACB-14, will be developed on a two-year cycle and TIs on a four-year cycle. These follow-on ACBs will provide additional warfighting capability and enable us to achieve a fully non-proprietary open architecture combat system for the DDG-51 Class. By 2025, all 62 DDG-51 class will be modernized using OA principles.

NEXT GENERATION CRUISER

Question. The National Defense Authorization Act contained a provision that requires all new ship classes of submarines, aircraft carriers and cruisers be nuclear powered. The first opportunity to apply this direction will be on the next generation cruiser program, currently designated CG(X). The outyear budget submitted with the fiscal year 2029 request showed the first ship of the CG(X) class will be procured in fiscal year 2011, however since no nuclear components for that ship have been procured and the design effort is very immature, it is highly unlikely that this ship will begin procurement in fiscal year 2011.

Admiral McCullough, in your opinion, when will the next generation cruiser, the CG(X), begin procurement?

Response. Secretary Gates announced on 06 April 2009 that "we will delay the Navy CG(X) Next Generation Cruiser program to revisit both the requirements and acquisition strategy." The results of the Navy's Analysis of Alternatives (AoA) for the Maritime Air and Missile Defense of Joint Forces (MAMDJF) capability are currently within the Navy staffing process.

Question. Admiral McCullough, I am sure you are aware of the Authorization language directing nuclear propulsion for future ships. As a nuclear trained officer, what are the advantages and disadvantages of using nuclear propulsion for the CG(X) class of ships?

Response. The advantages and disadvantages of nuclear power are discussed in the Report to Congress on Alternative Propulsion Methods for Surface Combatants and Amphibious Warfare Ships.

Nuclear propulsion offers both operational advantages and cost advantages for the surface combatants. As noted in the Report to Congress, nuclear propulsion provides the ability to operate at high power for sustained periods of time which would provide better surge to theater and time on station compared to its fossil fueled counterparts. In addition, nuclear propulsion may reduce ship vulnerability because of its markedly reduced tether to the logistics chain as well as its ability to conduct high speed maneuvers without regard for propulsion fuel capacities. For the Ballistic Missile Defense mission, nuclear propulsion provides sufficient energy to maintain high power radar demands for extended periods of time.

The main disadvantage of nuclear propulsion is acquisition and disposal costs are higher than fossil fuel variants. The higher acquisition cost is due to the need to procure the nuclear reactor core upfront which provides the energy requirements for the 35 year life of the ship. This cost, known as the nuclear premium, is mitigated when compared to fossil fuel variants when life cycle costs, such as expected increases in fossil fuel costs, are realized over the life of the ship and the class.

Question. Secretary Stiller, if the Navy makes the decision to utilize nuclear propulsion for this ship class, when is the earliest that the ship could be procured?

Response. If CG(X) is determined to be nuclear powered, the Navy plans to leverage the CVN-78 Propulsion Plant design for a nuclear version of CG(X) due to the investment and resulting capabilities and maturity of that propulsion plant. Funding would be needed approximately 4 years prior to ship construction to support long-lead time reactor components and minor redesign. The Air and Missile Defense Radar (AMDR) development schedule and technology maturation directly impacts the ship design and procurement schedules. Historically, a new radar design requires 8-9 years, and a ship design (with leveraging of major components such as the propulsion plant) requires 5-7 years. Current acquisition requirements indicate critical technologies must achieve a technology readiness level (TRL) of 6 (System/subsystem model or prototype demonstration in a relevant environment) prior to procurement (i.e., MS-B). The AMDR TRL level is approx level 4/5 and would require approximately 6-7 years to support ship procurement. Ship design efforts supporting ship procurement should mature sufficiently within the radar maturity schedule.

Question. Admiral McCullough, the Navy has operated nuclear powered cruisers in the past. Can you explain the difference, if any, in the concept of operations between these previous nuclear powered cruisers and the future cruisers?

Response. The concept of operations for CG(X) is under development and will not be completed until after a Navy preferred alternative is decided. That said, Navy surface combatants, past and present, nuclear or conventional, are multi-mission platforms that can operate with a Carrier Strike Group, Surface Action Group, Amphibious Ready Group, or independently. From a warfighting aspect, if CG(X) is nuclear powered, I anticipate that the primary difference in its operating concept compared to past nuclear cruisers will be based on its advanced Integrated Air and Missile Defense Capability.

Over 40 years of experience and operations, in addition to major technological advances, have improved performance and reduced life cycle and acquisition costs of naval nuclear propulsion plants. Compared to the earlier classes of nuclear surface combatants, a modern nuclear cruiser would have more power, fewer people, and require less maintenance.

CVN-78 AIRCRAFT CARRIER

The newest aircraft carrier will implement several new technologies (launching system, enhanced flight deck, ordnance handling systems, etc.) and have a brand new nuclear propulsion plant. With the ship just having started construction and already bumping up against the cost cap imposed by the Armed Services Committee, it is highly likely that this ship will experience some sort of cost growth.

Secretary Stiller, the Committee understands that the Electromagnetic Aircraft Launching System (EMALS) contract is overrunning and initial estimates show \$250 million growth from the fiscal year 2008 estimate. This is more than double the cost of \$225 million used as the original estimate for this system. What is the current status of the EMALS program and do you concur with the magnitude of this cost increase? What impact will this growth have on the EMALS schedule with respect to delivery of the system to the carrier for installation?

Response. EMALS is currently in the System Design and Development (SDD) and procurement of long lead time shipset production components has begun. The SDD phase currently extends through 4th qtr FY11. Near term events such as successful completion of High Cycle Test (HCT) Phase I, positive progress on High Cycle Test (HCT) Phase II and Highly Accelerated Life Testing (HALT), as well as start of commissioning testing for System Functional Demonstration (SFD), are expected to validate the system design and enable smooth transition into production. Production Readiness Reviews (PRRs) are being conducted in 3rd qtr FY09 to support release of EMALS subsystem components for production. Baseline drawing packages are projected to complete by end of FY09.

As with any developmental system, the initial test and integration of the EMALS technology had some schedule and cost risk. Delays that resulted in concurrency in SDD and production have resulted in additional risk. Through a very detailed review process, the Navy has identified the EMALS technical, cost and schedule risks,

developed mitigation strategies, and is executing the approved program baseline. The Navy has, however requested budget adjustments through the PB 10 development process to further mitigate risk. Further actions will likely be needed in the outyears to ensure this program provides the needed capability consistent with the ship's construction schedule. The results of upcoming testing will be used to determine the final shipset production costs. The current EMALS SDD and production planning efforts support the scheduled delivery date for CVN-78.

Question. Secretary Stiller, at what point does the Navy need to decide to continue with the EMALS effort or revert to a steam catapult system for the CVN-78 program? How likely is it that the Navy will walk away from EMALS and return to a steam catapult for CVN-78? What will the cost be to incorporate the use of a steam catapult into the design of the ship?

Response. Senior Navy leadership recently concluded a detailed assessment of the viability of both EMALS and steam catapults on the CVN-78 Class and determined that EMALS would continue as the CVN-78 Class aircraft launching system. The current EMALS System Development and Demonstration (SDD) phase and production schedules continue to support the CVN-78 construction schedule; however, due to the overlap of system level testing and shipset production hardware procurement decision, cost and schedule risks exist. The management focus, review processes and oversight that the Navy has employed continue to mitigate these risks. While steam catapults were deemed at the conclusion of the assessment to be a technically viable alternative to EMALS, reverting to steam would have incurred a 12-18 month delay in CVN-78 ship delivery, along with associated costs for redesign and delay. Any decision made now or in the future to revert to steam would significantly increase the cost and schedule impact to CVN-78 ship design and construction.

Question. Secretary Stiller, is the CVN-78 program experiencing problems with any of the other new technologies being introduced on this ship?

Response. The development of key CVN-78 technologies continues to progress at a rate consistent with that needed to support the ship construction schedule. The Major critical technologies/capabilities maturing for integration into lead ship include: Electromagnetic Aircraft Launch System (EMALS), Advanced Arresting Gear (AAG), Dual Band Radar (DBR), Joint Precision Aircraft Landing System (JPALS), Evolved Sea Sparrow Missile (ESSM) P3I Data link, Improved Survivability, Enhanced Flight Deck, and Improved Weapon and Material Handling. To provide additional technical oversight in this area, OSD established a CVN 21 Program Critical Technologies Integrated Product Team (IPT) that monitors the maturation of those new technologies identified as critical to the successful execution of the program. In April 2007, this IPT completed a Technology Readiness Level (TRL) Assessment that validated the maturation plans of each critical technology. Since that time, all critical developmental systems, with the exception of the AAG, ESSM P3I Data link, and DBR, have achieved TRL 6 maturity, in that a system model or prototype has been demonstrated in a relevant environment. Each of the remaining four technologies is being tracked by the IPT and is projected to be on track to accomplish the testing requirement to achieve TRL 6 by FY 2011, well in advance of their construction need dates. The IPT is chartered to meet semi-annually until all critical technologies have achieved this readiness level. Additionally, ship construction efforts have started well with activities being on or ahead of schedule.

Question. Secretary Stiller, with the budget for the new aircraft carrier already bumping up against the cost cap, and with the trouble the Navy has historically had in estimating ship costs (especially lead ship costs), how confident are you that the new carrier will deliver within the cost cap?

Response. The President's Budget for Fiscal Year 2010 reflects an end cost of \$10,846M for CVN-78 which is \$581M below the congressionally mandated cost cap for CVN-78. As the lead ship of the next carrier class ships, there are inherent cost risks to the program. However, the program is executing to the approved acquisition program baseline. The Navy is employing considerable management attention and oversight to ensure the new carrier performs within the budget allocations and congressional cost cap. The Navy will continue to track program cost relative to the cost cap and adhere to the reporting requirement as outlined in Section 122 of the 2007 National Defense Authorization Act (NDAA).

VIRGINIA CLASS SUBMARINE PROGRAM

Question. Last year, the Navy signed a multi-year procurement contract for the procurement of eight submarines over the time period from fiscal year 2009 through fiscal year 2013. The Navy is set to begin procurement of two Virginia Class submarines per year in fiscal year 2011. The Committee was instrumental in the Navy accelerating the two ships per year procurement as a result of adding advance pro-

curement funding above the budget request for the program in the fiscal year 2008 bill.

Secretary Stiller, is the Virginia class submarine program ready to move to the procurement of two submarines per year beginning in fiscal year 2011?

Response. Yes. The Navy and the shipbuilders have been planning to increase production to two submarines per year starting in fiscal year 2011. Therefore, most of the infrastructure is already in place to support two per year production. Furthermore, the Block II and Block III multi-year procurement contracts allowed shipbuilders to level workload and procure material in Economic Order Quantity, providing stability to the shipbuilding industrial base and supporting the transition to an increased production rate. In addition, the National Defense Authorization Act for Fiscal Year 2009 provided the Navy with the authority and funding (\$79 million) for advance procurement and construction activities to provide a more efficient ramp-up to two submarines per year.

Question. Secretary Stiller, are both contractors positioned to ramp up production efforts to the point that two submarines per year can be built without impacting delivery schedules?

Response. Yes, both shipyards are positioned to ramp up production to build two submarines per year without adversely impacting delivery schedules. The Block III contract includes an incentive for investment in construction facilities and fixtures required at the shipbuilders in support of two per year production similar to the incentive, known as CAPEX, in the Block II contract. Additionally, the shipbuilders have put together comprehensive hiring and manning plans to ensure that they have enough qualified tradespeople and engineers to support the production increase.

As a result of these efforts and the continued push to reduce overall cost and schedule, both shipyards are meeting and exceeding delivery schedule goals. Block II ships are currently projected to deliver 7 to 12 months ahead of contract delivery dates, and the shipbuilders are targeting a 60-month build span for Block III ships—better than the contracted 66-month build span.

Question. Secretary Stiller, the cost goal of the Navy prior to moving to two submarines per year was \$2 billion each (expressed in fiscal year 2005 dollars). Now that you have achieved this goal, is the program continuing with cost reduction measures?

Response. Yes. The Navy achieved the CNO goal for reducing procurement cost through a combination of multi-year procurement contracts, construction performance, and design for cost reduction. These strategies will continue to be used in the future to reduce ship procurement costs, and the Navy will apply these same principles to reduce the lifecycle cost of VIRGINIA Class, through Reduction of Total Ownership Cost (RTOC). Reduction in Total Ownership Cost will expand the Design for Cost Reduction methodology by including construction, operation & support (O&S) and other lifecycle costs.

LPD-17 AMPHIBIOUS TRANSPORT DOCK

Question. To reach a fleet size of 313 ships, ten LPD-17 San Antonio Class amphibious transport dock ships are required. The Congress appropriated funds for the tenth ship of this class last year. However, there has been talk of the Marine Corps desiring an eleventh LPD-17 class ship to better satisfy amphibious requirements.

Admiral McCullough, the 30 year shipbuilding plan states that the Navy requires ten LPD-17 class ships to reach its stated fleet size of 313 ships. However, there has been discussion of the Marines requiring an additional LPD-17 ship to satisfy amphibious requirements. Has the Navy been in active discussions with the Marine Corps to determine how many LPD-17 ships are really required?

Response. The President's Budget for FY 2010 includes \$185 million of Advance Procurement for an 11th LPD. The Navy is in constant communication with the Marine Corps to determine how many LPD-17 ships are required. On a broader scale, the Quadrennial Defense Review is looking to determine the amphibious force structure required for our National Defense Strategy.

Question. Secretary Stiller, the first three LPD-17 class ships experienced some well-publicized construction problems that delayed delivery and increased the cost. A partial explanation for these problems is hurricane-related, but the contractor and Navy also share a good portion of the blame. In your opinion, are the quality problems with the LPD-17 class program behind us? If so, what evidence can you point to that makes you think this? If not, what steps is the Navy taking to incentivize the contractor to deliver a higher quality ship?

Response. Similar to other shipbuilding programs, the LPD-17 class continues to improve and mature as lessons learned on early ships are rolled into follow-on ships

and each successive hull completes the building process. The level of completeness and quality continues to improve with each ship delivery; and the build plans for follow-ships are becoming more stable. LPD-19 was more complete at delivery than LPD-18; LPD-20 was more complete than LPD-19; and future LPDs will continue this trend.

All four commissioned ships of the LPD-17 class, as well as the ships currently under construction, have been thoroughly inspected by the Navy; and corrective actions have been taken, as necessary. Each ship has received fewer trial cards than its predecessor indicating lessons learned are being incorporated. NGSB has changed the leadership of their Quality Assurance Department and has instituted a number of process improvement teams to improve their system design specifications/standards, craft training programs, and Quality Assurance program to ensure the remaining ships of the class are delivered at the highest quality.

Question. Secretary Stiller, what is the status of contract negotiations for the tenth LPD-17 ship? When do you expect this contract to award? Do you expect to award this contract as a fixed price contract?

Response. \$10M of long lead time material has been put under contract to date. The Navy is working closely with Northrop Grumman Ship Building (NGSB) to determine when additional material, including raw materials, can be bought in support of the ship construction schedule in order to best leverage the LPD-17 class vendor base and ship's material requirements. The follow-on long lead time material list with procurement need dates has been received and a contract modification is being negotiated between NGSB and the Navy. Once under contract, long lead time material will be purchased throughout FY09 in accordance with the program material ordering schedule. The full Request for Proposal for the design and construction of LPD-26 was issued in May 09 with a fixed price incentive contract award targeted for first quarter of FY10.

313 SHIP FLEET

Question. The Navy has reported the size of the fleet required to satisfy the Nation's maritime security requirements at 313 ships. The Chief of Naval Operations, Admiral Gary Roughead, has validated this number and has gone so far to say it is a floor, implying the fleet size should even be larger. Assigning a nominal 30 year life to a ship means that ten ships per year would need to be produced to reach and maintain a fleet size of 300. Over the last ten years, the requested ship quantities have averaged less than 7 ships per year. The last time the Navy built at least 9 ships was in 1992 when 11 ships were constructed. Building 7 ships per year (assuming the same 30-35 year ship life) will sustain a fleet size of 210 to 245 ships.

Admiral McCullough, with the low shipbuilding rate that the Navy has requested in the recent past, how do you envision reaching and maintaining a fleet of 313 ships?

Response. In keeping with the Secretary of Defense's April 2009 budget statement, the Navy is reviewing many of its recapitalization programs and its force structure requirements to ensure that the 313 force still represents an alignment between the Navy and the expectations for future force capability. As a result of the ongoing QDR and changes in defense priorities, there is a possibility that there will be some changes in the overall total number of ships required by the Navy and the mix of ships within that total. It would be premature to speculate on what the final force required by these reviews will be.

Therefore, as part of President's Budget 2010, the Navy is exploring approaches whose objective is to stabilize the shipbuilding investment accounts and provide a predictable and reliable demand signal with respect to requirements to the industrial base while these fundamental force structure requirements reviews occur.

The National Security Strategy and Quadrennial Defense Reviews, currently in progress, will determine the shape of the Navy's future. While the demands placed on the Navy for forces by the Combatant Commanders and by our presence, Security Cooperation and Humanitarian Assistance missions continue to be significant; we have been largely able to meet these demands with the force we have in commission today. The 313 force construct is both a total inventory of ships and a specific mix of ships in that total and is focused on the threats that were envisioned for the 2020 timeframe.

Since completing the Force Structure Assessment that led to the 313 requirement, myriad changes have been realized in the strategic security environment around the globe. There has been a burgeoning proliferation of advanced cruise missiles, submarine technology is getting ever more difficult to counter and ballistic missile capabilities are becoming more precise and lethal. All of these challenges have required

the Navy to reassess its force structure and mission capabilities. It is in this sense that the CNO stated 313 was a floor vice a ceiling in his previous testimony.

Question. Admiral McCullough, the Chief of Naval Operations has stated that a Fleet size 313 ships is really a floor, implying that the true requirement is somewhat larger. Do you have a sense for how large a fleet the CNO thinks the Navy requires? Do you have a sense of whether the Navy will make any type of formal change in the fiscal year 2010 request to the stated objective of 313 ships in an effort to reach whatever quantity the CNO deems more appropriate?

Response. The National Security Strategy and Quadrennial Defense Reviews, currently in progress, will determine the shape of the Navy's future. While the demands placed on the Navy for forces by the Combatant Commanders and by our presence, Security Cooperation and Humanitarian Assistance missions continue to be significant; we have been largely able to meet these demands with the force we have in commission today. The 313 force construct is both a total inventory of ships and a specific mix of ships in that total and is focused on the threats that were envisioned for the 2020 timeframe.

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LEASING OF FOREIGN-BUILT SHIPS

Question. By statute, the Navy is permitted to lease foreign-built ships to augment its sealift capability. These leases are limited to five years. Essentially the Navy enters into these leases on a recurring basis which individually meet the intent of the leasing restrictions, but when considered cumulatively would violate the spirit and intent of the 1990 Budget Enforcement Act, since the ships end up being leased in excess of five years, spread over different leasing arrangements.

Secretary Stiller, last year you told the Committee that the Navy leased 17 foreign built, U.S. flagged vessels. How many foreign built ships are currently being leased?

Response. MSC currently has 26 ocean-going, U.S.-flag vessels under time charter for periods exceeding six months. Of those 26 vessels, 14 are foreign-built. Since 2002, the number of U.S.-flag, foreign-built ships under charter has declined from 22 to 14. All of these vessels are crewed by U.S. citizen mariners.

Question. Secretary Stiller, what is the Navy's plan for reducing the number of foreign-built ships that are leased?

Response. Since 2002, the number of U.S.-flag, foreign-built ships under charter has declined from 22 to 14. Furthermore, the number of chartered vessels that are foreign-built is projected to decrease in the near future—from 14 in FY09 to 10 in FY14 and then remain stable, representing approximately 9% of the total ships under MSC operation.

The Navy and USMC worked together to reduce the amount of foreign-built ships on long-term lease in the Maritime Prepositioning Force restructuring. In this restructuring, five foreign-built ships have been replaced by three U.S.-built Large Medium Speed Roll-On/Roll-Off Ships (LMSRs), one U.S.-built T-5 tanker, and a self-sustaining containership which will be chartered. Since there are insufficient numbers of self-sustaining U.S.-built containerships, it is expected that only a foreign-built ship will meet this requirement.

Two of the long-term foreign-built vessels have been the HSV SWIFT and the HSV WESTPAC EXPRESS. These HSVs provided valuable experience before DoD invested in the Joint High Speed Vessel (JHSV) program. As the JHSV production line starts delivering in 2012, these foreign-built HSV leases will be terminated as they are replaced by JHSVs.

Of the remaining foreign-built charters, only 6 have been on charter for more than five years and 4 of those have been to support Army and Air Force afloat prepositioning requirements. If these Services could establish a firm requirement and commit to funding the charters for a sufficient period of time, then it would be possible to construct ships in the United States to meet those requirements. However, the Navy would need a commitment of at least 10–15 years if the ships were built from a cold production line because of building time and lease duration required to support commercial financing. This is far longer than the Army and Airforce have been willing to commit to a requirement. History has shown that the number and types of ships required to meet the Army and Airforce needs has

changed within a 10-year period. However, if there were a hot production line of ships being built for the Jones Act trade similar to those needed to meet their requirements, then a shorter commitment (5–7) years would be required and might be achievable. This was the case when MSC chartered two T-5 tanker replacements for a five-year period on behalf of Defense Energy Support Center. Taking advantage of an ongoing production line also would allow for efficient production and reduce the costs for both the Navy and the U.S. shipping companies in the Jones Act trade. A larger production line will also ensure replacement parts are available, since the original equipment manufacturers (OEM) will be more inclined to build/carry spares for multiple ships versus a one ship production line.

Navy will continue dialogue with the U.S. maritime industry on the size and capabilities of containerships to meet potential charter requirements. Navy has been pursuing the National Defense Features program to partner with the American shipping companies so that their future U.S.-built ships have military utility and/or the Navy can build ships on the same hull with the required features.

Question. Admiral McCullough, what would be the impact to the Navy's mission if the Congress were to prohibit the Navy's ability to enter into these leases on foreign-built ships?

Response. Restricting the Navy's ability to charter foreign-built ships would cause certain DOD sealift requirements to be unmet because of the unavailability of suitable U.S.-built ships to meet short-term and emergent sealift missions.

MSC's ability to meet DOD sealift transportation and other requirements would be severely impaired due to the lack of U.S.-built ships in commercial service and available for DOD charter. Such restrictions would likely force a greater use of MSC's Surge Fleet and MARAD's Ready Reserve Force ships, missed commitments, and potentially significantly higher costs.

In addition, the requirement to charter only U.S.-built ships would impact the Navy's ability to rapidly experiment with new technologies—e.g. High Speed Vessels—before deciding whether to embark on a capital investment and shipbuilding program.

The Department of Defense charters, vice owns, ships to respond efficiently when a military requirement is immediate, subject to change, or of uncertain duration. Ships are initially contracted for a lease of 12 months or less, often with options to extend use up to 59 months total to provide flexibility. Currently, there are 26 ocean-going vessels under time-charter for periods that fall in the mid (less than 5 years) to long-term category; 14 of these are U.S.-flagged foreign-built ships. Of the 14, three have been chartered since the 1980s, as authorized by law, but will be terminated in July 2009.

Since 2002, the number of foreign-built ships under charter has declined from 22 to 14. Despite the fact that few commercial ships with military utility have been constructed in United States shipyards in the past 25+ years. When a foreign-built ship is used for these charters, the ship is required to be converted to U.S.-flag, and crewed by United States citizen mariners prior to the beginning of the charter. Conversion work must be accomplished in a United States shipyard.

COMMON HULL FORMS

Question. The Navy and industry have stated for several years that reducing the number of ship hull forms would help stabilize the shipbuilding program and have the added benefit of reducing cost. Candidate programs for using an existing hull form would be the Command Ship and Hospital Ship programs. Additionally, all amphibious ship types could theoretically utilize the LPD-17 hull design.

Secretary Stiller, the Committee understands there are several programs that could benefit from using an existing hull design. Could you outline the benefits of using a common hull form in the Navy's shipbuilding program?

Response. There are several motivations that drive us to common hull forms (and other common design elements) whenever possible in shipbuilding programs. First, in the design stage, the use of an existing hull form and the corresponding parts of the product model removes hull design work-hours from the project scope. This could save not only cost but also program lead time. Subsequently, in production, the use of a common hull form has productivity advantages resulting from both facilities and labor considerations. In terms of facilities, continuing with the same hull design allows the shipyard to make additional use of infrastructure and tooling already in place. For example, certain material flow arrangements and fabrication set-ups can be left as is, thereby avoiding change-overs to suit a new design with a different interim product stream. On the labor side, the use of an existing hull form design enables repeated use of certain existing work packages and exploits pre-existing learning efficiencies; the degree of re-set of the learning curve is lessened as

some interim products are familiar. The reduction in these physical and human resource discontinuities could result in a smoother and more predictable production process.

The repeat use of common hull forms has been adopted in the past. For example, the DD-963 hull form was used for the DD-993 and CG-47 classes. The ability of a given, currently-in-production hull form to be adapted for use in a new shipbuilding program depends on the degree to which the hull design parameters (configuration, displacement, design speed, seakeeping characteristics, structure, subdivision, etc.) are able to support the capabilities of the new program (payload weight and volume, mobility, port access, electrical power generation and distribution, information infrastructure, signatures, etc.). When the match is close enough, there is a potentially viable case for the common hull approach.

Question. Secretary Stiller, what are some of the candidate programs that could benefit from this concept?

Response. The Navy is proposing that variants which leverage existing production lines be explored. LCC(R) will replace the afloat command and control capability provided by the current LCC class. The AoA is exploring T-AKE and LPD-17 as common hull ship variants.

The potential requirement for a LSD/LPD(X) is being explored through an ongoing Capability Based Assessment and will examine the opportunity for common hull reuse. The next generation surface combatant could potentially use either the DDG-51 or DDG-1000 hull form.

Question. Admiral McCullough, why does the Navy not make using an existing hull form a requirement of the analysis of alternatives for these programs instead of just paying lip service to the concept?

Response. The Navy's long range vision reduces the types and models of ships, maximizes the reuse of ship designs and components, and implements open architecture for software and hardware systems and mission systems modularity. Specifically, the Navy is proposing that variants which leverage existing production lines be explored.

The potential requirement for a LSD/LPD(X) is being explored through an ongoing Capability Based Assessment and will examine the opportunity for common hull reuse. While we are committed to maximum re-use of the hull forms, there are limits to which this principle can be effectively applied. Since the missions for which future ships are designed will necessarily determine the size, shape and capabilities required by future hulls, we cannot commit to a specific hull for a specific ship until we know what needs to be accomplished in these missions and capabilities. Even if we do not reuse a hull form, it is still possible to standardize the common internal components. We are working to reduce the various numbers and types of valves, pump and motor components and systems internal to our ships so that we can realize the benefits of economic order quantity and supply chain efficiencies in the future.

Ultimately, the Navy's shipbuilding plan recognizes the need for careful management of requirements and aggressive cost control measures that include:

- Evaluating each ship class and identifying cost reduction opportunities while balancing warfighting requirements, cost and industrial base realities.
- Emphasizing repeat builds of ships.

SHIPBUILDING BEST PRACTICES

Question. The Government Accountability Office (GAO) has released a draft report comparing commercial shipbuilding best practices to Navy shipbuilding practices. The GAO reports that the biggest difference between the two is that commercial shipbuilders and buyers do not move forward with a construction contract until a full understanding of the effort required to design and construct the ship is reached which enables the shipbuilder to sign a contract that fixes the price, delivery date, and ship performance parameters.

Secretary Stiller, the Government Accountability Office has released a draft report that compares the Navy's shipbuilding practices to the commercial shipbuilding sector. Essentially, the report states that the commercial shipbuilder and buyer agree on all aspects of the ship (price, schedule, and performance parameters) before a contract is signed. Do you agree that this practice would lead to a more stable and less risky shipbuilding program?

Answer. The Federal Acquisition Regulations applicable in Navy shipbuilding limit the extent and effectiveness of pre-contract communications and resulting risk reduction before contract award. While much has been done to improve the FAR with regard to pre-contract communications with industry, Navy practices simply do

not approach the level of communication and risk reduction that exists in the private sector prior to contract signing.

To illustrate, a commercial owner will typically engage multiple shipbuilders in independent, detailed discussions regarding budgetary constraints and requirements trade-offs, before requirements are solidified and in advance of entering into a contract; in that way, a commercial owner can explore the most affordable solutions, exploit different shipbuilder capabilities, and effectively pre-select a shipbuilder while both parties are assured that major design and construction risks have been identified and removed prior to entering a contract.

In a sole source situation, the Navy does use methods such as Alpha Contracting which emphasizes conducting actions concurrently and cooperatively, with a close relationship between an integrated Government team and contractor team. Under Alpha contracting, the Government and contractor personnel work hand-in-hand to define scope and cost as opposed to the traditional bargaining approach, while also eliminating contractor questions or concerns. Similarly, as the contractors complete development of portions of their technical and cost proposals, an integrated Government team, including representatives of the program office, the contracting office, and the contract administration office, may review the proposal and attempt to resolve issues the team identifies. When the completed proposals are then formally submitted to the contracting officer, much if not all of it may have already been negotiated.

Managing, mitigating and retiring major risk items prior to contract award for detail ship design and construction is always a goal. The difference between commercial and Navy practices may be in the assessment of that risk, including the Navy shipbuilder's ability to understand how accepting that risk will influence cost and schedule performance.

Question. Secretary Stiller, the report further states that before construction begins, commercial shipbuilders complete key design phases that correspond with the completion of a three dimensional product model. Is the design process associated with the DDG-1000 program and the new aircraft carrier an attempt to mimic this practice?

Answer. The completion of Design Phases and 3D Product Models before construction begins on a given construction zone of a ship is a practice that is common across both commercial and military shipbuilding.

Question. Secretary Stiller, the report also states that key technologies are known, and final information on the systems that will be installed on the ship is required, to allow this design work to finish prior to construction. Additionally, once construction begins in the commercial sector, no change orders are typically allowed. Although the Navy has learned these lessons time and again, why is it that you cannot abide by these practices?

Answer. SECNAV is required to certify to Congress that the program's readiness to commence construction after completion of a production readiness review. At the Production Readiness Review, the Navy reviews the technical soundness of the production design, construction approach, and the associated resource plan. Once approval is granted by SECNAV, the start of construction can commence. The Navy subsequently monitors contract performance and quality to assure that the shipbuilder meets stipulated contract terms (performance, quality, etc.) and that the products meet the Navy's technical requirements. In October 2008, SECNAVINST 5000.2D institutionalized the Two-Pass, Six-Gate DON Requirements and Acquisition Governance process that ensures the various stakeholders from the resources, requirements and acquisition communities address and revisit at defined intervals; technical maturity, affordability and program health of each of the Department's major defense acquisition programs. The Navy will continue to focus on affordability of programs by ensuring designs are mature prior to the start of construction and emphasizing design for affordability concepts in both initial design and follow-on procurement.

In 2001, the Assistant Secretary of the Navy instituted a shipbuilding cost growth configuration control policy intended to minimize contract change orders. Program change order budgets were reserved for safety, contractual defects, unavailable contractor furnished equipment, testing and trial deficiencies, and statutory and regulatory changes accompanied by funding. A Program Manager cannot approve any change that does not fall into one of the five categories.

Question. Secretary Stiller, do you envision incorporating any of these commercial practices [from the GAO report on commercial shipbuilding best practices] into the Navy shipbuilding program?

Response. The Navy acknowledges the GAO's efforts to identify commercial shipbuilding best practices and is reviewing its recommendations. In general, when attributes or missions of our ships are commercial in nature, the recommended best

practices have been and will be applied, as appropriate. Further, as recommended by the GAO, the Navy acknowledges and concurs with having a significant level of design completion before initiating construction, and having critical technologies successfully prototyped and demonstrated prior to implementation in the design. In addition, the Department routinely works with shipbuilders to discuss technical requirements and specifications, and cost savings opportunities and trade-offs.

The Navy leverages commercial practices on ship acquisitions that are based on commercial design such as the T-AKE and the JHSV programs. In the case of the later T-AKEs, the Navy was the beneficiary from General Dynamics NASSCO partnership with the Daewoo Ship Engineering Company (DSEC), a wholly owned subsidiary of Daewoo Shipbuilding and Marine Engineering of Okpo, Korea. DSEC is producing designs and providing other services for NASSCO in its efforts to deliver on the \$1 billion contract from U.S. Shipping Partners L.P. for construction of double hulled product tankers for use along the U.S. coasts. NASSCO has taken the benchmarking recommendations and is investing in their facility and implementing process improvements which has resulted in production efficiencies to the T-AKE class. The T-AKEs are delivering ahead of the contract schedule and within the target cost. JHSV, a competitive award to AUSTAL, USA, is based on a parent commercial design, the Hawaiian Super Ferry. JHSV is leveraging commercial best practices.

SHIPBUILDING CHANGE ORDERS

Question. The Navy has long been guilty of ordering changes to their ships after the design and construction contracts were awarded. While some of these changes are safety related and certainly required, a lot of them are discretionary in nature. These changes contribute to cost growth on the ship due to the disruption and delays that they tend to cause. The shipbuilders have stated on numerous occasions that these change orders are a major contributor to cost growth. Last year, Secretary Stiller testified that the Navy was instituting procedures to get the discretionary portion of the change orders under control.

Secretary Stiller, the Navy has historically been guilty of directing change orders to the shipbuilders after the design and construction contracts were awarded. There is no doubt that this practice results in higher costs. Last year you stated to this Committee that you had instituted procedures to ensure that only necessary changes were being made, and removing the discretionary changes. Have you seen a decrease in the number (and associated cost) of discretionary change orders?

Response. In 2001, the Assistant Secretary of the Navy instituted a shipbuilding cost growth configuration control policy intended to minimize contract change orders. Change order budgets would only be reserved for safety, contractual defects, unavailable contractor furnished equipment, testing and trial deficiencies, and statutory and regulatory changes accompanied by funding. The memo directed further that program managers may not approve change proposals outside of these categories which increase acquisition cost. In October 2008, SECNAVINST 5000.2D institutionalized the Two-Pass, Six-Gate DON Requirements and Acquisition Governance process that ensures the various stakeholders from the resources, requirements and acquisition communities address and revisit at defined intervals; technical maturity, affordability and program health of each of the Department's major defense acquisition programs. The Navy will continue to focus on affordability of programs by ensuring designs are mature prior to the start of construction and emphasizing design for affordability concepts in both initial design and follow-on procurement. The procedures and processes currently in place will ensure that the Navy remains vigilant on minimizing contract change orders. Further, ship programs such as the LPD-17 and VA Class have demonstrated a reduction in change orders at delivery as compared to what was budgeted and an overall downward trend on the follow ships of the class.

Question. Secretary Stiller, if change orders are in fact on the decline, why do the Navy budgets continue to contain the same amount of funding for change orders (five percent of the basic construction contract cost) as has been historically provided for the change order effort?

Response. In 2001, the Assistant Secretary of the Navy instituted a shipbuilding cost growth configuration control policy intended to minimize contract change orders. Change order budgets were reserved for safety, contractual defects, unavailable contractor furnished equipment, testing and trial deficiencies, and statutory and regulatory changes accompanied by funding. Change order budgets are dependent on the level of technical risk for a particular acquisition strategy. Programs that are considered clean sheet designs would inherently have more risk than ship program which leverages a common hull design. In the meantime, the Navy continues

to focus on affordability of programs by ensuring designs are mature prior to the start of construction and emphasizing design for affordability concepts in both initial design and follow-on procurement. The procedures and processes currently in place will ensure that the Navy remains vigilant on minimizing contract change orders. Ship programs such as the LPD-17 and VA Class have demonstrated a reduction in change orders at delivery as compared to what was budgeted and an overall downward trend on the follow ships of the class.

SHIPBUILDING INDUSTRIAL BASE

Question. The shipbuilding industrial base in the United States has shrunk considerably in recent years, largely due to the reduction in the number of Navy ships being constructed. The industrial base essentially consists of six shipyards (three owned by General Dynamics and three owned by Northrop Grumman) that build the great majority of the fleet. There is no question that the low rate of ship construction has contributed to the higher cost of ships. The shipbuilders have said on numerous occasions that a higher volume of ships would go a long way towards stabilizing the industrial base and reducing cost.

Secretary Stiller, your shipbuilding contractors have stated frequently that increased volume would help stabilize the industrial base and control costs. Yet the Navy continues to build ships at historically low levels. Do you agree that this low building rate is causing problems for the industrial base?

Response. The Department recognizes that low levels of shipbuilding activity introduce challenges and inefficiencies at the shipyard. The Navy has developed a long term shipbuilding procurement plan that provides the foundation for future planning within the shipbuilding industry. The Navy continues to work with Congress to enact this strategy and where appropriate, has proposed multi-year procurements which provide further stability and result in cost savings. Reducing volatility, through multi-year procurements and a stable shipbuilding procurement profile, enables industry leaders to make informed decisions regarding current operations, employment, infrastructure, and future capital investments. The Navy continues to work with shipbuilders to strive for level loading of facilities and facilitization to improve efficiency. The Department believes that future stability in the shipbuilding program is a cornerstone in sustaining a cost effective and affordable future maritime capability supporting the National Security Strategy. Toward that end, the Department of the Navy will continue to work with the Congress to ensure a stable shipbuilding strategy that is aligned with the FY 2010 President's Budget.

Question. From the customer viewpoint, is the state of the industrial base affecting the quality of the ships that are being delivered to the Navy?

Response. The Department recognizes that low levels of shipbuilding activity introduce challenges and inefficiencies at shipyards. The Navy has developed a long term shipbuilding procurement plan that provides the foundation for future planning within the shipbuilding industry. The Navy continues to work with Congress to enact this strategy and where appropriate, have proposed multi-year procurements which provide further stability and result in cost savings. Reducing volatility, through multi-year procurements and a stable shipbuilding procurement profile, enables industry leaders to make informed decisions regarding current operations, employment, infrastructure, and future capital investments.

Further, ensuring quality processes are instituted is a top concern of Navy leadership. The Secretary of the Navy commissioned a Navy Advisory Panel to perform an independent evaluation of the culture of quality in the Department of the Navy (DON). The evaluation is to provide the Secretary with recommendations to improve policies, design standards, contractual requirements, performance benchmarks, industry practices, and oversight that define and govern the effective delivery of quality product, platforms, and system to the war fighter.

Question. Admiral McCullough, a dismissive answer is to say that the Navy needs to buy additional ships. Since you are in charge of all the Navy's resources, you realize it is not an easily solved problem. What do you see as a possible solution for restoring and stabilizing the shipbuilding industrial base?

Response. The Department recognizes that low levels of shipbuilding activity introduce challenges and inefficiencies at the shipyards. The Navy's acquisition and requirements community has developed a long term shipbuilding procurement plan that provides the foundation for future planning within the shipbuilding industry. The Navy continues to work with Congress to enact this strategy and where appropriate, has proposed multi-year procurements which provide further stability and result in cost savings. Reducing volatility, through multi-year procurements and a stable shipbuilding procurement profile, enables industry leaders to make informed de-

cisions regarding current operations, employment, infrastructure, and future capital investments.

SHIPBUILDING COST ESTIMATES

Question. Although the Department of Defense is required by statute to conduct an independent cost estimate on major acquisition programs, these programs can be funded to lower confidence levels of the estimates, presumably to fit more program within a given year's request. Recent examples of programs that have not been funded to the full Independent Cost Estimate include the DDG-1000 program, the Joint Strike Fighter, the Advanced Extremely High Frequency Satellite program, the CVN-21 aircraft carrier, and the VH-71 Presidential Helicopter. When the inevitable cost growth is realized, it creates ripples throughout the Department as funding is shifted to pay for the growth. Funding these major acquisition programs to their full cost estimate from their inception would go a long way towards creating stability in the budget.

Secretary Stiller, by statute major acquisition programs are required to have an independent cost estimate conducted as part of the acquisition process. However, there is no statute that directs the Navy to actually fund to that independent estimate. In fact, several programs are not funded to this estimate, but to a lower confidence estimate. What factors are considered in funding a program to a lower confidence level than that provided by the independent cost estimate?

Response. The Navy uses quantitative cost risk analysis techniques, such as Monte Carlo simulations, in developing risk based cost estimates to assist in formulating the shipbuilding budget. Risk analysis is performed for each ship. This includes the use of risk parameters for areas of historical shipbuilding cost growth such as labor, contractor furnished material, Government Furnished Material, economic/market conditions (shipyard labor and overhead rates, inflation), unique programmatic or technical conditions, and potential schedule issues. However, this is one of several tools and considerations that are used to create the PB 10 shipbuilding budget. The Navy is required to address full funding at MS A and prior to the technology design phase. At MS A, an independent cost estimate is developed and the CAIG performs an assessment. During the technology development phase there is still opportunity to trade off cost versus requirements before the Acquisition Program Baseline is established. Program initiation for ships occurs at MS B and the CAIG performs an independent cost estimate at that time. The Milestone Decision Authority typically directs the service to fund to a specific estimate. Confidence level is only one factor considered in budgeting. Program maturity, program complexity, and program risk are also factors in the budgeting process.

Question. Secretary Stiller, in shipbuilding more than in any other area, do you not find the disruption caused by faulty estimates in your budgets to be much more severe than funding the major acquisition programs correctly in the first place?

Response. The quality of a cost estimate and the corresponding budgeted amount are the key to success in a program. The Navy is assessing cost estimating techniques and tools across product lines to ensure improvement in our cost estimating ability. As programs mature through the acquisition process, the Cost Analysis Improvement Group (CAIG) within OSD will help to refine the program's cost estimate. The Milestone Decision Authority, informed by the Navy and CAIG estimates, will determine the estimate for the program.

Question. Secretary Stiller, the Navy and Air Force acquisition deputies testified last week regarding combat aircraft acquisition. They stated that they had a policy of funding programs to the eighty percent confidence level, implying that programs were funded to a level beyond the CAIG estimate. Since the majority of shipbuilding programs are major acquisition programs, could you provide a list of ship programs that are funded to a level greater than the CAIG estimate?

Response. At Milestone A (MS A), the Navy develops an independent cost estimate and the CAIG assesses it. During the technology development phase which occurs between MS A and MS B, cost-requirement trade-off opportunities are considered. At MS B, the CAIG develops an independent cost estimate for the program. The Milestone Decision Authority determines which estimate to adopt for the program.

Today, the only shipbuilding program funded to a level greater than the CAIG estimate is the Joint High Speed Vessel (JHSV) program. The Milestone Decision Authority approved funding to the service's cost position, which is higher than the CAIG estimate, during the November 2008 MS B decision meeting.

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

THURSDAY, APRIL 2, 2009.

MISSILE DEFENSE AGENCY

WITNESS

LIEUTENANT GENERAL PATRICK J. O'REILLY, DIRECTOR

INTRODUCTION

Mr. DICKS. The Committee will come to order.

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. DICKS. All those in favor of the motion, signify by saying aye. Opposed?

The motion carries. The Committee will come to order.

Today, the Defense Appropriations Subcommittee will focus its attention on missile defense systems. We welcome Lieutenant General Patrick O'Reilly, Director of the Missile Defense Agency.

I want to call on Mr. Young.

Mr. YOUNG. Mr. Chairman, I want to join you in welcoming General O'Reilly for a very, very important matter that we are going to discuss today, and I am going to put my opening statement in the record.

General, you might be interested in knowing we have a schedule of votes that is probably going to interrupt a lot of our hearing today.

Mr. DICKS. We want to get started, and why don't you go ahead with your statement. We want to hear your statement, and we want you to proceed as you need to.

General O'REILLY. Thank you, sir.

Good morning, Mr. Chairman, distinguished members of the committee, it is an honor and a greatly appreciated opportunity to testify before you today on the Department of Defense's missile defense program.

During fiscal year 2008 and fiscal year 2009 to date, the Missile Defense Agency achieved many accomplishments, including the execution of a successful Aegis Standard Missile-3 Block IA and Standard Missile-2 Block IV interceptor salvo flight tests, the delivery of 30 additional SM-3 Block IA interceptors, including four deliveries to the country of Japan, a Ground-based Midcourse Defense intercept test utilizing the entire sensor and command and control suite deployed in the Pacific; emplacement of two and refurbishment of two additional Ground-based interceptors at Fort Greely, Alaska; the deployment of AN/TPY-2 radar to Israel; the execution of an experiment involving the closest data collection to date of a boosting missile from satellite on orbit; the safe destruction of a malfunctioning U.S. satellite; repeated demonstration of the atmos-

pheric laser beam compensation during Airborne Laser flights; delivery of the first Terminal High Altitude Area Defense, or THAAD, unit for testing. We have had three THAAD intercept flights, including a recent salvo launch of two THAAD interceptors.

However, we also face challenges, including 8 of 22 flight test delays in 2008; four target failures out of 18 launches; one interceptor failure; a cost growth of \$264 million. We have had significant production time lost due to quality problems in our factories, over 50 days in GMD, over 40 days of lost production on the STSS program and over 20 days—

Mr. DICKS. Would you suspend? Are we supposed to have phones out of the room—turned off.

Okay, you may proceed.

General O'REILLY. But we have lost a significant amount of time due to quality programs. We have had a replanning of \$252 million in costs and 25 weeks of schedule delays due to unanticipated operational deployments of our developmental systems.

In response to those challenges, we have worked with our 6 stakeholders and leadership to enhance the management oversight, strengthen our relationship with the warfighting community and improve our acquisition, execution and test planning of the Ballistic Missile Defense, or BMDS, System.

We have initiated four areas of improvement. First, we have adopted a series of initiatives to improve acquisition and oversight of contracts we will award over the next 18 months, which is the majority of our contracts.

Second, we are institutionalizing Missile Defense Agency and service roles and responsibilities for the element systems of the BMDS.

Third, we have recently initiated a systematic review of BMDS test planning, in partnership with the Army, Navy and Air Force operational test agencies, with the support of the Director of Operational Test and Evaluation.

And, finally, we continue to enhance our regional defenses against short-, medium-, and intermediate-range ballistic missiles, while maintaining our midcourse defense against intercontinental ballistic missiles, while ensuring we are prepared to leverage the tremendous advantage of emerging technologies to more economically intercept threat missiles of all ranges in their ascent phase.

Meanwhile, the proliferation of ballistic missiles of all ranges continue. I defer to the Intelligence Community for their detailed estimates, but current trends indicate that the proliferation of ballistic missile systems using advanced liquid- or solid-propellant propulsion technologies are becoming more mobile, survivable, reliable, accurate and capable of striking targets over longer distances.

Iran has grown its short-range and medium-range missile inventories, and with its recent successful launch of the Safir Space Launch Vehicle on 2 February 2009, Iran has demonstrated their intercontinental ballistic missile class technologies.

Meanwhile, North Korea deploys No Dong ballistic missiles capable of reaching Japan and South Korea and U.S. bases throughout the region, and has announced its intent to launch its own space vehicle as early as tomorrow night.

Likewise, Syria continues to field updated short-range missile ballistic systems and acquire Scud-related equipment and materials from North Korea and Iran.

In sum, there has been an increase of over 1,100 additional ballistic missiles in the past 5 years, bringing the total number of ballistic missiles outside of the United

States, Russia or China to over 5,600.

With your permission, I would like to submit the remainder of my remarks and written testimony and look forward to answering your questions.

[The statement of General O'Reilly follows:]

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Unclassified Statement of

Lieutenant General Patrick J. O'Reilly

Director, Missile Defense Agency

Before the

House Appropriations Committee

Defense Subcommittee

Thursday, April 2, 2009

*Embargoed Until Released by the
Appropriations Defense Subcommittee
United States House of Representatives*

**Lieutenant General Patrick J. O'Reilly, USA
Director, Missile Defense Agency
Before the
House Appropriations Committee
Subcommittee on Defense
April 2, 2009**

Good morning, Mr. Chairman, distinguished Members of the Committee. It is an honor and a greatly appreciated opportunity to testify before you today on the Department of Defense's missile defense program. During FY 2008 and FY 2009 to date, the Missile Defense Agency (MDA) achieved many accomplishments, including: the execution of successful Aegis Standard Missile (SM)-3 Block IA and SM-2 Block IV interceptor salvo flight tests and delivery of 30 additional SM-3 Block IA interceptors (including deliveries to Japan); a Ground-based Midcourse Defense (GMD) intercept test utilizing the entire sensor and command and control suite deployed in the Pacific; emplacement of 2 and refurbishment of 2 additional Ground Based Interceptors at Fort Greely, Alaska; deployment of a AN/TPY-2 radar to Israel; the execution of an experiment involving the closest data collection to date of a boosting missile from a satellite; the safe destruction of a malfunctioning U.S. satellite; repeated demonstration of the atmospheric laser beam compensation during Airborne Laser (ABL) flights; delivery of the first Terminal High Altitude Area Defense (THAAD) unit for testing; and three THAAD intercepts, including the launching of a salvo of two THAAD interceptors using an operational firing doctrine.

In addition to our successes, we also faced challenges developing the BMDS in FY 2008 and FY 2009 to date, including 8 out of 22 flight test delays, 4 target failures out of 18 target launches, one interceptor failure, \$264M cost growth, and management of over \$252M cost and 25 weeks of schedule revisions due to unplanned operational deployments of our systems under development. In response to those challenges, we have worked with our stakeholders to enhance our management oversight, strengthen our relationship with the war fighter community, and improve our acquisition and test planning of the Ballistic Missile Defense System (BMDS). We have initiated four areas of improvement. First, we have adopted a series of initiatives to improve acquisition and oversight of the contracts we will award over the next 18 months. Second, we are institutionalizing MDA and Service roles and responsibilities for elements of the BMDS that the Deputy Secretary of Defense has designated for assignment to a lead Service. Third, we recently initiated a systematic review of BMDS test planning in partnership with the Army, Navy, and Air Force Operational Test Agencies with the support of the Director for Operational Test and Evaluation. Finally, we continue to enhance our regional defenses against Short-, Medium-, and Intermediate-Range Ballistic Missiles (SRBMs, MRBMs, IRBMs), maintain our midcourse defense against IRBMs and Intercontinental Ballistic Missiles (ICBMs), while ensuring we are prepared to leverage the tremendous advantage of emerging technologies to more

economically intercept threat missiles of all ranges in their ascent phase prior to the deployment of countermeasures.

Meanwhile, the proliferation of ballistic missiles of all ranges continues. I defer to the Intelligence Community for more detailed estimates, but current trends indicate that proliferation of ballistic missile systems, using advanced liquid- or solid-propellant propulsion technologies, are becoming more mobile, survivable, reliable, accurate and capable of striking targets over longer distances. Iran has grown its short-range and medium-range missile inventories, while improving the lethality, deployability, and effectiveness of existing systems with new propellants, more accurate guidance systems, and sub-munition payloads. With its recent successful launch of the Safir Space Launch Vehicle on February 2, 2009, Iran also demonstrated technologies that are directly applicable to the development of ICBMs. North Korea deploys a No Dong ballistic missile capable of reaching Japan and South Korea and U.S. bases throughout the region, and continues to develop a new IRBM capable of reaching Guam. Furthermore, North Korea has announced its intent to launch its own SLV over the next couple of days. Likewise, Syria continues to field updated SRBM systems and acquire Scud-related equipment and materials from North Korea and Iran. An additional concern is North Korea's and Iran's repeated demonstrations of salvo launches, indicating large ballistic missile attack raid sizes must be considered in developing the BMDS. In sum, there has been an increase of over 1,100 additional ballistic missiles over the past 5 years,

bringing the total of ballistic missiles outside the U.S., Russia and China to over 5,600.

Missile Defense Approach and Strategy

The mission of the Missile Defense Agency is to develop defenses to protect the U.S. homeland, deployed forces, Allies and friends against ballistic missiles of all ranges and in all phases of flight. Given the unique characteristics of short-, medium-, intermediate-, and long-range ballistic missiles, no one missile defense interceptor or sensor system can effectively counter all ballistic missile threats. War fighters are not only faced with the challenge of intercepting relatively small objects at great distances and very high velocities, but they may have to counter large raid sizes involving combinations of SRBMs, MRBMs, IRBMs, and ICBMs and, in the future, countermeasures associated with ballistic missile attacks. While countermeasures can be developed to degrade the performance of missile interceptor systems, it is much more difficult to develop countermeasures that degrade fundamentally different missile defense interceptor systems operating together in different phases of a ballistic missile's flight. Thus, the most operationally effective missile defense architecture is a layering of endo-atmospheric and exo-atmospheric missile interceptor systems with ground and space sensors connected and managed by a robust command and control, battle management and communication (C2BMC) infrastructure. Moreover, the most cost effective missile defense

architecture is one that emphasizes intercepts during a threat missile's ascent phase of flight.

Status of Missile Defense Interceptor Development in FY 2008 and FY 2009

(to date)

The SRBM defense capabilities of the BMDS consist of the Patriot Advanced Capability-3 (PAC-3), THAAD, and the Aegis SM-2 Block IV and a portion of the SM-3 Block IA missile battle space with associated fire control software. PAC-3 uses hit-to-kill technologies to intercept SRBMs in the atmosphere in the terminal phase of flight. MDA transitioned PAC-3 to the U.S. Army in March 2003, and although we continue configuration management and sustain engineering and architectural responsibility, MDA does not manage the Missile System Enhancement (MSE) or other upgrades to PAC-3:

THAAD. THAAD is uniquely designed to intercept targets both inside and outside the Earth's atmosphere, making the use of countermeasures against THAAD very difficult. THAAD consists of interceptors, command and control, and a THAAD-configured AN/TPY-2 radar to intercept short-range and medium-range missiles using hit-to-kill technologies. THAAD has accomplished 6 intercepts out of 6 attempts against short-range ballistic missiles. Early in FY 2008, soldiers of the Army's 6th Air Defense Brigade operated THAAD as it demonstrated the autonomous integration of the radar, launcher, the fire control communications and the interceptor to intercept a short-range "Scud-type" unitary

target just outside the atmosphere. In June 2008 THAAD demonstrated for the first time the ability to intercept a separating SRBM target. On March 18, 2009, we demonstrated the ability of THAAD to launch on a cue from an Aegis BMD ship (via Link 16) to intercept a separating target high in the earth's atmosphere. This test of an integrated THAAD-Aegis BMD-PAC-3 architecture was the first test involving a salvo launch of two THAAD interceptors. Not only did the primary interceptor hit the target, but the second THAAD interceptor also hit the largest remaining piece of target debris several seconds later.

In FY 2008, THAAD also participated in six war games and exercises to demonstrate its capability to Combatant Commanders, provide training opportunities, and help develop tactics, techniques and procedures. THAAD's involvement in MDA ground tests during this time involved testing THAAD with other components of the BMDS (including PAC-3 and Aegis) for theater and strategic missile defense engagements and provided data to support capability decisions. THAAD will complete testing and analysis to support the FY 2010 Army material fielding review. There has been great interest in the THAAD system from Gulf Cooperation Council countries. Through Foreign Military Sales, the United Arab Emirates Government requested 3 THAAD batteries and additional radars to maximize availability. This will represent a 6.9 billion FMS sale for the U.S. Government. Other countries in the region, including Qatar, have requested performance and cost data for THAAD batteries as well.

Despite THAAD's significant successes, the program continues to struggle with production qualification of several remaining missile components, including ordnance initiation safety and booster separation motor control devices. Successful qualification of these components by the end of FY 2009 is key to gaining the Army's approval for fielding in FY 2010.

Aegis BMD. Aegis Ballistic Missile Defense (BMD) cruisers and destroyers integrated with SM-3 hit-to-kill midcourse interceptors and SM-2 terminal interceptors are fundamental to our ability to surge missile defense capability to protect deployed forces and allies against short- and medium-range ballistic missiles. In FY 2008, Aegis BMD began significant upgrades to the BMD Signal Processor in the Aegis BMD weapon system and delivered 20 SM-3 Block IA interceptors (not including 9 SM-3s delivered to Japan). We also updated software (BMD 3.6) on 8 U.S. destroyers, bringing the total number of U.S. Aegis BMD-capable ships ready on station at the end of 2008 to 18, a year ahead of original schedule. MDA also installed engagement software (3.6) on the Japanese Destroyer Kirishima and began installation of the more advanced C2BMC software (4.0.1) in the U.S.S. Lake Erie. We plan to continue software development for potential installation on all Aegis BMD ships during the next decade to enable the deployment of the more capable SM-3 Block IB interceptor and, eventually, the SM-3 Block IIA interceptor currently being developed with our Japanese partners.

Early in FY 2008, we demonstrated Aegis ability to simultaneously engage two short-range unitary ballistic missile targets using SM-3 Block IA interceptors. In FY 2008, we also completed an end-to-end Multiple Element Integration & Test for the 3.6.1 software and deployed the first East Coast BMD ship (U.S.S. Ramage). In December 2007, we conducted the first intercept of a ballistic missile with an allied Navy ship. Using the SM-3 Block IA, the upgraded Japanese Destroyer successfully intercepted the medium-range separating target in space. This test also marked a major milestone in the growing missile defense cooperative relationship between Japan and the United States. In a subsequent test in November 2008, the Japanese Maritime Self Defense Force performed another successful interceptor launch and fly-out, but a few seconds prior to intercept, the kill vehicle's guidance control motor failed resulting in a test failure. The failure investigation of the SM-3 Block IA continues.

The U.S. Navy and MDA are also collaborating on plans for a near term Sea-Based Terminal defensive capability. MDA is upgrading the Aegis BMD weapon system, and the Navy is upgrading the SM-2 Block IV missile with plans eventually to deploy approximately 70 interceptors to provide a near-term terminal engagement capability on Aegis BMD ships that began in 2008. In June 2008, we intercepted a short-range target in the terminal phase of flight using a dual salvo SM-2 Block IV with modified Aegis ship software. Unlike the SM-3 interceptors, which use hit-to-kill technologies to collide with a target, the SM-2 missiles for

the near-term Sea-Based Terminal defense capability use an explosive charge in very close proximity to the target to destroy the threat missile. Additionally, we continue to develop with the Navy an advanced Sea-Based Terminal defense solution for more effectively countering short-range ballistic missiles in the next decade.

The SM-3 Block IB missile, with Aegis 4.0.1 BMD fire control software is being developed to counter SRBMs and IRBMs. The SM-3 Block IB will have greater reliability, producibility and performance against more advanced threats and clutter during end game. The Aegis 4.0.1 fire-control software will enhance the ability of an Aegis BMD ship to use external sensor data in the formulation of a fire control solution to launch any SM-3 Block IB interceptor and engage a threat ballistic missile. The first flight of the SM-3 IB is scheduled for FY 2010.

With the purchase of Aegis BMD and Patriot Advanced Capability-3 assets, Japan is fielding a multilayered system that is capable of being interoperable with the U.S. system. Japan's C2BMC (JADGE) system will integrate Japanese BMD sensors and interceptors and will be capable of exchanging information with U.S. missile defenses, including the forward-based X-band radar at Shariki and U.S. Aegis BMD ships in the region. The X-band radar at Shariki provides precise early detection and tracking to increase the probability we will destroy any lethal target launched by North Korea. We are continuing our work with Japan to increase Standard Missile-3 range and lethality.

The development of the 21-inch diameter Standard Missile-3 Block IIA interceptor will increase our capability to engage IRBMs and ICBMs from Aegis BMD platforms. The first flight of the SM-3 Block IIA is scheduled for the 2013/2014 timeframe. This effort is one of the largest and most complex cooperative projects ever undertaken between Japan and the United States.

GMD. The IRBM and ICBM defense layers of the BMDS consist of the Ground-based Midcourse Defense (GMD) element today, the SM-3 Block IB with 4.0.1 fire control software (IRBM only), and the SM-3 Block IIA missile with Aegis 5.1 BMD fire control software by the end of the next decade. We recently completed the construction of a second GMD missile field at Fort Greely, Alaska, and a new multi-function test and operational silo, and an additional In-Flight Interceptor Communication System Data Terminal (IDT) at Vandenberg Air Force Base, California. In FY 2008, we refurbished two existing GBIs, delivered two upgraded Exo-atmospheric Kill Vehicles (EKVs), started using a back-up GBI for flight-testing, and emplaced two new interceptors (for a total of 26 GBIs) early in FY 2009. One of our emplaced GBIs was removed in mid-year 2008 in order to provide a flight test interceptor for FTG-05. This also allowed us to have a backup interceptor for a flight test. Unfortunately, we also experienced unexpected health and status indicators of GBIs in their silos that warranted removal to perform unscheduled maintenance and missile refurbishment. Additionally, two of our emplaced GBIs have upgraded kill vehicles to address obsolescence issues.

These upgraded kill vehicles will not be operationally accepted until we have first used them in flight testing in late FY 2009.

Status of Missile Defense Sensor and C2BMC Development in FY 2008 and FY 2009 (to date)

The BMDS relies on space-based (Defense Support Program, space-based infrared satellites and, in the future, an operational Space Tracking and Surveillance System (STSS) constellation), sea-based mobile (Aegis BMD ships and Sea-Based X-band), and ground-based (Upgraded Early Warning Radar (UEWR), AN/TPY-2 and European Midcourse Radars) sensors to provide detection, tracking, classification and hit assessment information. The United States currently operates the Beale and Cobra Dane upgraded early warning radars (UEWRs) in California and Alaska (Shemya) respectively. The Royal Air Force operates the UEWR at Fylingdales Moor in the United Kingdom and, this year, we plan to complete system upgrades to the UEWR at Thule, Greenland. Two AN/TPY-2 radars have been deployed in forward-based modes at Shariki Air Base, Japan, and in southern Israel.

In July 2008 we conducted a major integrated sensor test (FTX-03) of the BMDS sensor and C2BMC architecture involving the simultaneous observation of an IRBM launched from Kodiak, Alaska using five operational BMDS sensors—the Air Force early warning satellite system, the forward-based X-band AN/TPY-2 radar near Juneau, Alaska, the UEWR at Beale, Aegis SPY-1 radar (USS

Benfold), and the Sea-Based X-band radar (SBX) radar in the Pacific Ocean. We were able to conduct simultaneous processing of data from multiple sources, correlate this data into a single track, and develop an engagement solution to achieve the simulated intercept. The threat-representative IRBM was acquired and tracked by several BMDS sensors, which provided data to the system's C2BMC and the Ground-based Midcourse Defense Fire Control in Colorado Springs, Colorado. War fighters conducted the associated radar, fire control, and simulated launcher operations.

FTX-03 collected data and mitigated risks for the GMD flight test 5 (FTG-05), conducted in early FY 2009. During that flight test, the GMD system intercepted an IRBM warhead within an operational integrated framework of sensors similar to what we used for FTX-03. We intended to test the GMD Exo-atmospheric Kill Vehicle against countermeasures, but the inter-stage panels on the target failed to eject when commanded and the countermeasures did not deploy. This was our last test using this particular target configuration. During this test, Aegis BMD performed as expected and conducted a simulated engagement of this IRBM target.

Integrating the BMDS via C2BMC. MDA is developing a Command and Control, Battle Management, and Communications (C2BMC) system that integrates the BMDS elements into a layered defense system. C2BMC will continue leading the NATO C2 BMD integration. Together with the NATO

Active Layered Theater BMD program office, initial development integration tests were completed in November 2008 and January 2009. Key to C2BMC integration is the centralized development of 7 common missile defense kill chain functions called the BMDS “Unifying Missile Defense Functions” (UMDF). The following UMDF will allow Combatant Commanders to automatically and manually optimize sensor coverage and interceptor inventory to defend against all ranges of ballistic missile threats.

Communications links (terrestrial and satellite) together and supports the Unified Missile Defense Functions and ensures that the Combatant Commander can execute his defensive mission. MDA will continue to maintain interface controls with C2BMC. We will complete transition of management of the terrestrial long-distance communications to the Defense Information Systems Agency (DISA) and the satellite communications ground stations to the Services in 2011.

Sensor Registration improves the overall accuracy of the network of sensors to support the C2BMC formation of the system track by ensuring the BMDS understands the relative position of every sensor in the network. Thus, sensor registration enables the integration of different sensor measurements in ballistic missile engagements.

Correlation and System Track functions create a single track of an object using multiple BMD sensors. Since many ballistic missile threats fly over great

distances, the BMD system relies on the correlation of multiple (land, sea, and space) sensors to form a common track picture and complete the target information handover to the weapon system kill vehicle. In 2007 and 2008 we developed requirements, assessed performance, executed hardware-in-the-loop demonstrations, and conducted live test events with Aegis simulated intercepts where system tracks were passed from the AN/TPY-2 through the C2BMC, and C2BMC provided Link 16 tracks to Aegis BMD ships. These demonstrations provided valuable data supporting the fielding of the AN/TPY-2 with C2BMC in Israel and data integration with the Arrow Weapon System for operational use in 2008. A live test of this capability is planned for FTM-15 in FY 2009.

System Discrimination is the BMDS function that determines whether objects resulting from a threat missile launch are lethal or non-lethal using inputs from multiple sensors. Different sensors, depending on location and capability, provide different features about objects associated with a ballistic missile attack. The resulting discrimination information is more accurate than input from any one sensor over a threat missile's trajectory.

Battle Management uses system tracks composed of correlated and discrimination data to identify sensor and weapon system taskings that enable the Combatant Commander to most efficiently implement weapon engagement plans. Fundamentally, engagement coordination combines all elements of UMDf to prioritize and assign threat tracks to specific interceptor systems to implement

operational objectives such as minimizing interceptor use, focusing on protecting a prioritized list of defended assets, or ensuring the highest probability of success. In 2008, C2BMC demonstrated aspects of engagement coordination by controlling AN/TPY-2 in support of the Arrow Weapon System. In GMD flight test 5, C2BMC demonstrated the ability to take cues from overhead non-imaging infrared sensors to develop a boost phase precision cue for the AN/TPY-2. In 2008, THAAD and Patriot demonstrated peer-to-peer engagement coordination in an integrated ground test (GTI-03) by providing in real time the engagement status of each weapon system's ability to engage missiles in accordance with the rules of engagement.

Hit and Kill Assessment uses all available sensor observations of the intercept to confirm a successful hit-to-kill engagement, assess payload type, or identify surviving objects rapidly enough to enable additional intercept attempts by the BMDS if possible.

Status of Missile Defense Technology Development in FY 2008 and FY 2009
(to date)

The greatest enabler of an operationally and cost-effective BMDS is the persistent capability to precisely track cooling missiles and reentry vehicles after boost phase. Early precision track of threat ballistic missiles is the key to destroying ballistic missiles during their ascent phase of flight, which is the most cost and operationally effective means to deny a potential adversary's ability to

launch ballistic missiles of any range and prohibit the employment of multiple reentry vehicles, sub-munitions, and countermeasures. Even partial success of ascent phase intercepts would significantly reduce the number of threat objects to be negated by our midcourse and terminal defenses. In 2010, we plan to demonstrate the technology to track cold bodies from space by using two Space Tracking and Surveillance System (STSS) demonstration satellites that will be launched this summer. Sensors on STSS satellites could provide fire control quality data for engagements of threat reentry vehicles and, when combined with radar data, will provide improved threat object discrimination. Following launch of the STSS, we will enter into a six-month on-orbit check-out period, after which we plan to use both targets of opportunity and dedicated targets to demonstrate STSS capabilities. Knowledge point-based lessons learned from these demonstrations will guide our decisions on the development of an affordable operational space sensor constellation.

The Near Field Infrared Experiment (NFIRE) satellite launched in April 2007 continues to operate in good health. We conducted NFIRE test mission 2B in September 2008 to collect first-of-a-kind high resolution plume and hard body data of a boosting missile at approximately 8 km range from a boosting missile. In this test, we collected multiple frames of data in multiple wavebands, which will help anchor plume to hard body handover algorithms for boost phase intercept applications. We continue to collect data on other targets of opportunity. We also

demonstrated very high capacity laser communications on board the NFIRE satellites.

Our boost phase intercept technologies include the Airborne Laser (ABL), Kinetic Energy Interceptors (KEI), and Net Centric Airborne Defense Element (NCADE) technology programs. In FY 2008 we verified ABL can acquire, track, and perform atmospheric compensation in flight against a non-cooperative target and completed installation of the high power laser on the aircraft. We achieved first light through the Beam Control/Fire Control and successfully fired the complete high energy laser weapon system from the aircraft on the ground in November 2008. We are addressing an optics contamination issue which subsequently occurred, but we currently are on track for a shoot down of a ballistic missile later in 2009.

In 2007 the Kinetic Energy Interceptor (KEI) program adopted a series of knowledge points, emphasizing interceptor development, to assess the progress of the high acceleration booster. In early FY 2008, we completed a static fire test of the second stage of the KEI to verify rocket motor performance under varied environments and loads. During that test, we identified nozzle and ballistics performance problems, which we corrected and successfully demonstrated in September 2008. Additionally, we successfully conducted a static fire test of the first stage in November 2008. We are still resolving technical issues associated with the booster nozzle controller, but current plans are to demonstrate booster

acceleration, velocity, and staging capabilities during KEI's first flight test in 2009.

In addition to developing boost phase technologies, the Multiple Kill Vehicle (MKV) technology program was established for integration of midcourse interceptors to address complex countermeasures by identifying and destroying all lethal objects in a cluster using a single interceptor. In early FY 2008, we delivered the initial models, simulations, and two MKV-L carrier vehicle long-range seeker telescopes for testing, and conducted a successful MKV-L hot firing hover test at the National Hover Test Facility, Edwards AFB.

In 2008 we also demonstrated the NCADE, a promising air-launch missile defense concept that uses a modified AIM-9X seeker to intercept a boosting missile target. Plume-to-hard body aim point transition was completed and sensors on-board an F-15 aircraft successfully detected, acquired, and tracked three stages of a boosting missile target.

BMDS Contingency Deployments in FY 2008

Due to the lack of deployed integrated missile defense capability today, the BMDS is developed so that elements can be deployed on a contingency basis at the request of a Combatant Commander. USSTRATCOM provides the requesting Combatant Commander an assessment of the capabilities and limitations of the developmental capabilities based on test information collected at the time of the Combatant Commander's request. Contingency deployments directed by the Joint

Staff usually require MDA to alter affected development programs' budget execution plans and schedules. An example is the unplanned deployment of the AN/TPY-2 X-band radar to Israel in August 2008 to bolster Israel's regional ballistic missile defense capabilities at a cost of over \$80 million. Additionally, we are involved with the Department's plans to provide options for dealing with any contingency associated with the potential launch of a Space Launch Vehicle from North Korea.

The February 2008 satellite-shoot down is another example of how the Department has leveraged MDA's expertise and products to respond to contingencies. The MDA played a key supporting role in a mission led by USSTRATCOM to destroy a large tank of toxic fuel onboard an out-of-control U.S. satellite about to reenter the Earth's atmosphere. Using several integrated BMDS sensors, other national sensor assets, a modified SM-3 interceptor and Aegis Weapon System onboard the USS Lake Erie, the Navy successfully destroyed the satellite and hydrazine tank. While successful, the time and level of technical expertise it took to plan and orchestrate this mission, the split-second fragility of the once-per-day shot opportunities, and the relatively low altitude of the satellite's decaying orbit deem this not to be an operational anti-satellite capability. The impact to the Aegis BMD program was a 3-month delay at a cost of \$112M to MDA.

U.S.-Israeli Cooperative Programs

The United States and Israel have cooperated on missile defense for over twenty years. Collaborative efforts have grown from early feasibility studies to the development and employment of the Arrow Weapon System, a fully-operational missile defense architecture that is interoperable with U.S. BMDS elements. New joint programs have advanced this cooperation: U.S. and Israeli industrial co-production of Arrow interceptors; the joint Short Range Ballistic Missile Defense Program's David's Sling Weapon System; and an initiative to provide Israel an upper-tier defense system.

The upcoming year will include several significant events that will demonstrate combined U.S. and Israeli Missile Defense capabilities. This week, the first intercept test of the enhanced and co-produced Arrow-2 is planned in Israel against a separating target. MDA will support Israeli tests of the Arrow System this year, conducting tests against the most challenging scenarios to date. Also this year, the Juniper Cobra exercise between European Command (EUCOM) and the Israeli Defense Forces will be the fifth and most complex exercise yet designed. U.S. BMDS elements such as the AN/TPY-2, THAAD and Aegis BMD will participate in these flight tests and exercises to demonstrate the interoperability and develop operational tactics, techniques and procedures associated with this coalition architecture.

MDA and Israel are also jointly developing the David's Sling Weapon System to defend against shorter range threats, to include some ranges that the PAC-3 system cannot engage. The first booster fly-out was successfully conducted in February 2009, with additional interceptor fly-outs scheduled later this year. The first intercept test is scheduled to occur in 2010. Additionally, MDA is coordinating with U.S. Services to identify opportunities for U.S. utilization of the David's Sling Stunner interceptor.

Finally, the United States and Israel have initiated development of an upper-tier component to the Israeli Missile Defense architecture. An Analysis of Alternatives of a land-based SM-3 and a new Arrow 3 missile indicated that the Arrow 3 alternative had a reduced 30 year life cycle cost and potentially better performance to meet Israel's requirements, but was also deemed to have very high schedule and technical risk to meet the Israeli proposed need date. Pending results of current FY 2010 budget deliberations, we will propose an Upper Tier project agreement based on achievement of knowledge points and agreement on funding allocation between the United States and Israel. To mitigate the Arrow 3 high schedule risk, we are pursuing concept development of a land-based variant of the proven Aegis SM-3 missile to meet Israel's more immediate upper tier requirements.

European IRBM and ICBM Defense Capability

We remain committed to working with our NATO partners to address the growing threat from ballistic missiles. The Department has been working to field sensors, interceptors, communications, and the C2BMC infrastructure needed to improve protection of the United States and, for the first time, extend coverage to all European NATO allies vulnerable to long-range ballistic missile attack from the Middle East. This European Capability focuses on relocation of the upgraded midcourse X-band radar, currently located at the Kwajalein test site, to the Czech Republic and the establishment of an interceptor field in Poland, pending ratification of signed missile defense agreements with both governments. We have signed a BMD Agreement and a supplemental Status of Forces Agreement with the Czech Republic. We have signed a BMD Agreement with Poland and continue to negotiate a supplemental Status of Forces Agreement.

This activity is currently under review by the Administration; however, we remain postured, in cooperation with European Command, the Army, and the Air Force, to move ahead with implementation in accordance with Administration direction and Section 233 of the FY 2009 National Defense Authorization Act. The European Capability team will continue planning and design activities as allowable under the Act to minimize delays in the start of Military Construction and site activation activities at both European Capability sites. Unless directed otherwise, it

is my intention to proceed with testing the 2-stage GBI to be ready if the Administration makes a decision to move forward.

International Cooperative BMD Activities

The proliferation of MRBM and IRBM range threat missiles warrants an international coalition approach to employing an operationally effective missile defense. Therefore, under the guidance of OSD(Policy), MDA works closely with Combatant Commanders, the State Department, and other Government Agencies to support their missions and international missile defense goals. Additionally, MDA has significant cooperative missile defense technology development efforts with several European, Middle Eastern, and Asian nations.

MDA international research partnerships and technology programs provide significant contribution to the BMDS. These partnerships include six “framework” agreements, signed by the Secretary of Defense, to facilitate BMD cooperation with Japan, the United Kingdom, Australia, Denmark, Italy and, most recently, the Czech Republic. Additionally, cooperative activities are under consideration with several other nations.

MDA continues to support Administration efforts to propose transparency and confidence-building measures, technology development programs, and missile defense architectures to collaborate with the Russian government. We have additionally invited Russian representatives to view our test flights, which they have attended in the past, and participate in our annual Multinational Conference. I

visited the Russian radar at Gabala, Azerbaijan, to personally determine whether its contribution to U.S. and NATO missile defense efforts would be significant.

Additionally, we have been able to identify several potential areas of collaboration based on U.S. and Russian technological strengths. MDA is ready to support more substantive technical and information-sharing initiatives with Russia.

Enhancing Oversight of MDA and Collaboration with the Services and War Fighters

As our missile defense development processes have matured, the Department has taken several significant steps to enhance accountability for MDA decision making and oversight by senior Department of Defense officials in collaboration with Combatant Commands and the Services. First, the Deputy Secretary of Defense established the Missile Defense Executive Board (MDEB), chaired by the Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L) and comprised of the following members: Assistant Secretary of State for International Security and Nonproliferation; Under Secretary of Defense for Policy; Under Secretary of Defense for Intelligence; Vice Chairman, Joint Chiefs of Staff; Commander, U.S. Strategic Command; Director of Operational Test & Evaluation (DOT&E); Director of Defense Research & Engineering; Vice Chief of Naval Operations; Assistant Secretary of the Army for Acquisition, Logistics and Technology; Deputy Under Secretary of the Air Force for Space Programs; Director of Program Analysis & Evaluation; and Director, Missile Defense Agency. The

MDEB meets bi-monthly to review program progress, inform missile defense budget decisions, conduct missile defense development portfolio trades, and provide guidance to MDA.

In September 2008, the Deputy Secretary of Defense established “business rules” that outline the transition and transfer of missile defense capabilities between the Missile Defense Agency and the Services. These rules designate that “transfer” of an element of the BMDS begins when the Deputy Secretary of Defense designates a “lead Service” to ultimately receive that capability. MDA is responsible for the development, manufacturing and testing for the lifecycle of BMDS elements, and the Services are responsible for developing the doctrine, organizations, training, logistics, personnel and facilities to effectively field and operate the element sub-systems of the BMDS. Once the MDEB concurs that transfer criteria, approved by the Deputy Secretary of Defense, have been met, the physical accountability and control of missile defense units, operations and support, and infrastructure responsibilities transfer to the lead Service. Research, development, manufacturing, and testing activities remain the responsibility of MDA after a BMDS element capability has been transferred to a lead Service. Accordingly, “hybrid” program offices, consisting of organizations reporting to either MDA or the lead Services will be formed to execute this division of responsibilities once a lead Service has been designated for a BMDS element.

In support of the MDEB as the COCOM advocate for missile defense, USSTRATCOM, in collaboration with the other Combatant Commands, Joint Staff, and the Services, assesses and prioritizes development of future missile defense capabilities. As previously stated, USSTRATCOM also performs Military Utility Assessments (MUAs) to determine the capabilities and limitations of our systems under development when they are considered for contingency deployments by the Combatant Commanders.

Meeting the challenges of countering missile defenses requires the participation of assets in all our Services, thus developing and deploying the BMDS are inherently joint endeavors. The Deputy Secretary of Defense's transition and transfer business rules define the roles and responsibilities of developing and fielding missile defense capabilities. Accordingly, the Services and MDA have begun developing Memorandums of Agreements (MOAs) to define the management and interrelationship of MDA's research, development, testing and manufacturing responsibilities and align them with the Services' Title 10 Operations and Support responsibilities. An "overarching" Army/MDA Transition and Transfer MOA was signed by the Secretary of the Army and me on January 21, 2009, and drafts of the Navy and Air Force MOAs are being coordinated by their respective staffs. A key aspect of the MDA/Service MOAs is the establishment of MDA/Service Boards of Directors to collaboratively review cooperative development, resolve issues

associated with the development and fielding of the Service designated BMDS elements, and raise unresolved issues to the MDEB.

Improving Acquisition of the BMDS

Enhancing System Engineering. The key to the effective and efficient management of the acquisition of a large, technically complex enterprise, such as the missile defense program, is the establishment of management baselines resulting from a disciplined systems engineering process. MDA manages its programs via resource, schedule, operational, technical, contract and test baselines. To strengthen the systems engineering process to create, manage and implement those baselines, MDA designated a senior executive position (designated the “Director for Engineering”) to establish engineering policy, ensure the disciplined practice of systems engineering fundamentals, and develop the systems engineering competencies of the missile defense workforce. The Director for Engineering oversees the career development of an engineering cadre that focuses on leveraging national expertise to assist MDA program managers in the cost, schedule, performance, and risk trades inherent in the development of executable baselines. Additionally, we created engineering “Knowledge Centers” (for Interceptor, C2BMC, Sensor, and Space application disciplines), lead by highly qualified senior engineers from Federally Funded Research and Development Centers (FFRDCs), academia, Government Laboratories, and industry, to mentor and foster the practical application of missile defense engineering competencies and technical problem

skills across the MDA workforce. Finally, to ensure the future health of MDA's engineering workforce, we have dramatically increased the number of recent engineering school graduates inducted into our two-year Career Development Program from 6 to 60 students per semester in order to sustain a population of over 200 entry level government engineers being mentored as they enter the MDA workforce.

Technology Maturity Assessments. To ensure the risk of technology insertion is well understood prior to advanced system development, we set specific knowledge points when sufficient data or knowledge is obtained from discrete events (typically a major test) to make decisions on high-risk aspects of development efforts that demonstrate the maturity of a specific missile defense function or capability. This approach enables us to assign Technology Readiness Levels (TRLs) that support programmatic decisions based upon the proven maturity of a technology under consideration.

Developmental Testing. While the benefit of early operational input to the development of missile defense systems is clear, premature entry into operational development and testing (i.e., before the design and configuration has been stabilized and basic technical concepts have been validated) risks expensive repetition of non-recurring engineering and operational development. To mitigate this risk, MDA is transitioning from "architecture-based" test objectives to "technical parameter-based" objectives identified early in a program to anchor

models and simulations (M&S). These M&S will estimate performance characteristics and cost-effectively demonstrate the mitigation of technical risks prior to committing to full acquisition development of a capability.

Independent Cost Assessments. MDA and the Services are establishing agreements to collaboratively develop high fidelity cost estimates, and we have invited the OSD Cost Analysis Improvement Group (CAIG) to independently assess the assumptions, product description, and cost estimating relationships and methodologies as cost estimates are developed. These cost estimates will be the basis of system engineering trades and programmatic decisions at all levels.

Working with Combatant Commanders. The Combatant Commanders, led by USSTRATCOM, collaborate to develop a bi-annual Prioritized Capability List (PCL) of desired missile defense capabilities to provide the MDEB and MDA. Working with OSD and industry, MDA responds to the PCL with an assessment (called the Achievable Capabilities List) of the technical risk and programmatic feasibility of delivering the requested capabilities in the timeframe specified. STRATCOM then rates the degree to which the ACL satisfies the PCL in the form of a Capability Assessment Report (CAR) that forms the rationale and justification for MDA's budget submission. Though time intensive, this process ensures a comprehensive description of the Combatant Commander's needs and the responsiveness of OSD and MDA to meeting those needs. Additionally,

STRATCOM is a member of MDA's program control boards that manage the configuration of MDA's programmatic and operational baselines.

Cost, Schedule and Performance Trades. Missile defense cost, schedule and performance trade-offs, below the level of the Deputy Secretary of Defense, are executed at the MDEB. MDA uses Earned Value Management (EVM) in collaboration with the Defense Contract Command (and validated by joint MDA/DCMA Integrated Baseline Reviews), to ensure contractor cost, schedule and performance execution is rigorously implemented to rapidly identify program execution issues to expedite resolution. Additionally, knowledge points and definitive test assessments complement EVM to provide early insight into program progress. Execution issues, opportunities, and scope, specification and schedule trades are proposed to the MDEB on an as-needed basis to ensure program expectations are met by senior DoD officials.

Preliminary Design Review. It is the policy of MDA that contracts will be structured using a framework of incremental knowledge points that provide insight into the achievement of meeting contract objectives. These knowledge points form the basis and are in addition to existing entrance criteria for Preliminary Design Reviews (PDRs). PDRs formulate a decision point in which development knowledge point's measure execution maturity and support investment decisions. Evaluations of these knowledge points are conducted at Critical Design Reviews and Preliminary Design Reviews.

Life-Cycle Competition. MDA is standardizing contracting methodologies to remove impediments to the program's life-cycle competitive contracting through a construct that: 1) prohibits limitations on intellectual property and ensures the use of government-funded intellectual property; 2) ensures all government-funded infrastructure is transferable and fully documented; and 3) prohibits exclusive teaming arrangements where appropriate, ensuring the use of only highly qualified suppliers. Every opportunity to foster open competition will be pursued for all phases of missile defense programs.

Nunn-McCurdy Breaches. The Agency realigned the block construct of cost, schedule, and associated performance with delivery of ACL-required capability. We are exploring the possibility of proposing to the OSD comptroller and AT&L that we begin reporting our cost, schedule and performance baselines to Congress at the PE level starting in FY 2011.

Organizational Conflict of Interest. MDA strives to reduce Organizational Conflict of Interest by rigorously applying prohibition of contracting for inherently governmental functions in the transition to new consolidated services contracts, prohibiting developmental contractors from participating in the requirements process, and tightening oversight of potential organizational conflicts involving our system engineers and support contractors.

Acquisition Excellence. Implementation of the functional management construct has resulted in greater focus on our human resources at the enterprise

workforce level. Our functional managers focus on career development of acquisition professionals rather than enhancing skills for current job performance. This often involves transferring personnel after several years in a job to challenge them with new opportunities, education, and give them a greater acquisition experience base over their careers. In the functional acquisition area alone, over twenty very senior program managers or acquisition career field specialists have been moved between programs, bringing with them expertise, knowledge and a fresh focus. We seek to reward excellence with greater opportunities for career development and greater responsibilities.

Contract Management and Oversight. MDA's involvement with the Defense Contracting Management Agency (DCMA) has grown above and beyond our previous use of DCMA only in contract oversight and compliance. For example, we have recently requested that DCMA provide the following: an independent review of the cost growth in our GMD intercept flight tests; assessment of our supply chain vendor viability and compliance with best industry practices; certification in preparation for contract re-competition activities; and an independent assessment of GMD Exo-atmospheric Kill Vehicle (EKV) failures (including a validation that a EKV recently submitted to extensive over-testing is viable and ready for use). Finally, we are assessing how we can benefit from DCMA's risk management best practices.

MDA Contract Cost Overruns

In a March 2009 report, the Government Accountability Office noted that 11 of 14 MDA contractors overran their FY 2008 budgeted costs by \$152 million, or 3.7 percent. STSS accounted for more than 50 percent of the \$152 million FY 2008 overrun. Technical issues caused most of the overruns seen with STSS. Aegis BMD (SM-3 interceptor deliveries), the GMD prime, and MKV (engagement management algorithm development) performed their scope of work under budget. Since current BMDS contracts were initiated, we have had 31 contract realignments, adding nearly \$14 billion to the value of the contracts. MDA realigns contracts as required to accurately reflect contract changes, technical redirection, contractor internal replanning, and impacts of program funding changes. Our contractors' Earned Value Management (EVM) Systems require them to update the Integrated Master Schedule and related Performance Measurement Baseline (PMB) in a timely manner to reflect an accurately planned program after programmatic decisions have been made. This helps ensure cost metrics are realistic and used to understand cost trends, causes, and impacts, which in turn helps ensure continuous management and minimization of cost growth.

While cost overruns are never taken lightly, given the engineering complexity and the technological challenges we encounter in the development of the BMDS, we believe overall our cost variances have been managed well and minimized for this type of effort. As of December 2008, MDA had a \$37 billion

contract budget base allocated to current MDA prime contracts, initiated between 1996 and 2009. With 71 percent of that contract work having been completed, we are estimating a total overrun of \$2.1 billion or about 6 percent. We will continue to conduct a rigorous Integrated Baseline Review process with our contractors to help ensure we have executable programs and use EVM to effectively manage cost, schedule, and technical performance. The cost overruns have been accommodated and addressed within the overall FY 2008 and FY 2009 MDA budget.

MDA and Mission Assurance. During the 1990s and early part of this decade, we learned that missile defense systems have very little tolerance for quality control errors, as we experienced many flight test failures. Out of necessity, MDA has since nurtured a culture of mission assurance within the Agency and within the missile defense industry as quality control and mission assurance remain the Agency's highest priority. The Agency performs routine mission assurance evaluations and has permanent Mission Assurance Representatives at several sites.

Recently, there have been very disappointing lapses in quality management involving several of our industry partners that have impacted system element cost, schedule, and performance. There have been frequent schedule slips on the Space Tracking and Surveillance System program, some resulting in significant delays, due to quality issues caused by lack of discipline and detail in the procedures. Similarly, we have recently suffered over 20 days of manufacturing delays due to a

lack of discipline during EKV assembly and testing. Additionally, we lost almost 6 months of production due to an explosion in the propellant factory in Camden Arkansas, where the boosters for Aegis SM-3 missiles are produced. There are many other examples over the past year. We are working closely with DCMA to hold our industry partners accountable and sufficiently improve their execution of quality control in their manufacturing facilities.

Improving BMD Test Planning

Evaluating the BMDS is likely one of the most challenging test endeavors ever attempted by the Department of Defense. Ideally, comprehensive and rigorous testing is enabled by a stable configuration of the system being tested; a clearly defined threat; a consistent and mature operational doctrine; sufficient resources to repeat tests under the most stressing conditions; and a well-defined set of criteria of acceptable performance. Unfortunately, none of these situations apply to the BMDS. The hardware and software configurations of the BMDS frequently change since the system elements are still under development. There are many significant uncertainties surrounding the nature and specifics of the ballistic missile defense threat. Moreover, the operational doctrine for simultaneous theater, regional, and homeland defense is immature. Finally, costs range between \$40 million to \$200 million per BMDS flight test, making the repetition of a very elaborate flight test using flight conditions similar to previous tests cost-prohibitive.

In light of these challenges, the BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing to validate their accuracy, rather than physically testing all combinations of BMDS configurations, engagement conditions, and target phenomena. We are changing from an architecture-based approach to a parameters-based approach. The focus of the on-going BMDS test review has been to determine how to validate our models and simulations so that our war fighting commanders have confidence in the predicted performance of the BMDS, especially when those commanders consider employing the BMDS in ways other than originally planned or against threats unknown at this time. Despite this desire to rely on models, the complex phenomena associated with missile launches and associated environments mean that some performance measurements can only be investigated through flight and ground testing of the operational BMDS.

In early 2009, MDA is working in partnership with the BMDS Operational Test Agency (OTA) and the war fighter community to revitalize the missile defense test program and make it more affordable. Using criteria supplied by the OTA, the war fighter, and MDA's system engineers, ground and flight tests are designed to provide data that MDA and the operational test community use to anchor models and simulations and verify system functionality and operational effectiveness.

The BMDS comprehensive test review is being conducted in three phases. In Phase One, MDA and the Army, Navy, and Air Force Operational Test Agencies studied the models and simulations and determined the data needed to accredit them using a comprehensive Verification, Validation, and Accreditation process. Despite our desire to rely on models, they cannot provide all operational performance measurements required to assess the system. Much of the data needed to understand system survivability, reliability, performance in extreme natural environments, and supportability can only be measured through ground and flight tests. In Phase Two of the test review, test objectives and scenarios for a campaign of flight and ground tests are under development. Test personnel are prioritizing test designs based on requirements to determine the system's capabilities and limitations and the need of the Combatant Commanders to field a specific block of missile defense capability. Data from these tests are fed back into the models and simulations in order to make them credibly reflect system performance. These test objectives will not only address data necessary to validate the models of individual missile defense interceptor systems, but will also demonstrate the performance of the BMDS working as an integrated system. During Phase Three of the review, to be completed by the end of May 2009, the funding and infrastructure needed to implement the test campaigns will be addressed. A key cost driver will be the ability to establish an inventory of reliable targets to satisfy test requirements over a variety of flight test regimes.

Flight Test Cancellations. Missile defense ground tests, flight tests and exercises represent a complex, interdependent orchestration of instrumentation, ranges, targets, interceptors, sensors, and war fighters. MDA testers routinely encounter many factors that may disrupt the planned test schedule, including range conflicts, changes in hardware and software status, and real-world events. Constant re-scheduling and deconfliction add to the complexity of MDA test program management. Furthermore, although schedules are important to manage resources, thorough engineering analysis and risk management contribute more to mission assurance, and therefore take precedence over adhering to schedule.

Members of Congress have expressed concern over the Agency's restructuring of GMD FTG-04 (scheduled for the second quarter of FY 2008), a flight test that had already been slipped to accommodate the re-test of FTG-03, which was declared a "no test" because of a target failure. FTG-03a, conducted in September 2007, demonstrated an intercept of a threat-representative IRBM target using operational sensors (Beale) and the operationally configured GBI launched from Vandenberg AFB. As a result of MDA's adherence to test principles and a test strategy developed by the Independent Review Team and the Mission Readiness Task Force (MRTF), which increased the rigor of the readiness review process, the GMD program office identified quality issues on a unit used for flight data collection on the Exo-atmospheric Kill Vehicle to be flown in FTG-04.

After investigation to determine the cause and the development of a corrective action plan, the GMD Program Office determined the test interceptor would not be ready for the test until December 2008. As a result, MDA delayed the intercept portion of this flight test mission in order to address and correct the quality issue and restructured the mission from an Intercept Test to a Non-Intercept Test, designated FTX-03, to demonstrate BMDS multi-sensor fusion functionality with a simulated GBI intercept. MDA executed FTX-03 on 18 July 2008. The test was considered a partial success. While the test successfully achieved a number of test objectives, the STARS/GROW target did not reach the intended simulated intercept point due to the failure of the adapter fairing panels to deploy, which precluded achieving all test objectives. This test served as risk reduction for FTG-05, which achieved a successful destruction of the target warhead in December 2008 (though, again, the fairing panels on the target did not deploy and we were once again unable to achieve a key objective of detecting, tracking and intercepting a target armed with countermeasures). The OTA and the U.S. Strategic Command were informed of the changes to FTG-04.

I want to assure you that MDA is focused on conducting meaningful ballistic missile testing that rigorously demonstrates the capabilities of the BMDS. Executing our testing program in accordance with our testing schedule as established in the Integrated Master Test Plan is one of our highest priorities. Due to the increasing complexity of our test program, we may encounter technical issues

in the future that may necessitate a delay in testing or even test cancellations.

When these issues become apparent, you have my personal commitment that MDA will consult with USD/AT&L, DOT&E and the Operational Test Agencies before deciding to delay or cancel a ballistic missile defense test.

Ballistic Missile Targets

The Missile Defense Agency is fundamentally overhauling the target acquisition program to: 1) match the pace and increasing complexity of BMDS testing; 2) shorten the lead-time to contract, build, and deliver targets; 3) improve target program management; 4) improve target reliability; and, 5) reduce and control target program costs.

Since 2004 we have been transitioning away from the procurement of targets on a mission-by-mission basis through multiple contract vehicles and Federally Funded Research and Development facilities. The procurement of targets as prototypes built one at a time and require unique ground support equipment can no longer work in a test program requiring a flexible targets capability to deliver reliable and cost-effective targets. We began the "Flexible Target Family" (FTF) program in December 2003 to develop a single set of targets with common components that can be tailored to simulate known or potential short-, medium-, or long-range threats. Emphasis on common components and inventory buys down lead times for new missions and facilitates the quick tailoring of missions when needed.

To date, the FTF program has not met cost and schedule expectations. High costs and changes in target requirements led to the discontinuation of all variants except the 72-inch LV-2. We have had to delay the initial launch of the first long-range (72-inch) target until third quarter FY 2009 (for use in FTM-15). The 72-inch target (based on the newer Trident C4 motor) completed qualification testing in extremely rigorous environments in December 2008 and may become the primary long-range target starting this year.

In FY 2008 and FY 2009 to date, we launched 18 targets with four failures. Unfortunately, those failures had significant negative impacts on demonstrating key capabilities for both GMD and THAAD. We had two failures of the STARS target, which we will no longer be launching. Another failure was a foreign made target, and we have determined root cause and corrected that problem for the recent THAAD test. The most recent failure was a Lance target for Aegis last week. A failure investigation for this has just begun.

Target failures impacting our test schedules have driven us to adopt a new approach. First, we have issued a Request for Information from industry to identify all potential sources of targets. After an assessment, we will determine if a competitive acquisition strategy would improve target cost, schedule, and performance issues. Second, we are standardizing target requirements based on intelligence data and no longer precisely defining target scenes. This will allow the Agency to economically purchase greater quantities of targets. Third, to

mitigate the likelihood that target failures will have a severe impact on our flight tests and development programs, we are implementing a “rolling spare” concept by building a target contingency inventory. We plan the acquisition of at least one target in addition to immediate test requirements to be used for future testing. This additional target could be used for unannounced operational tests or to ensure target manufacturing delivery delays do not cause delays to test events.

We employed this approach in the FTT-10a/b THAAD flight test. Target failure during FTT-10 last September caused us to delay the flight test. We planned the THAAD retest (FTT-10a) to fly the same target (a foreign made asset), and kept a U.S. made backup ready, allowing us to proceed with the test within a month’s time (FTT-10b), if needed.

Funding improvements also will help increase the quantity of targets available for testing. We have adopted a common cost model to help adjust out-year funding requirements with improved accuracy. With the FY 2009 Defense Appropriations Act, we transferred target funding from other program elements to a Test and Targets Program Element and were provided an additional \$32M for FTF to initiate an inventory build up of critical long-lead hardware items.

We are also taking steps to control costs within the targets program. We are improving long-term requirement definition and identifying target cost drivers. We also have made internal management changes within our Targets and Countermeasures program office to improve overall accountability and results.

We are investigating possible changes to our acquisition strategy to include limiting the number of contract vehicles and target types. This will reduce administrative costs and increase the potential for economic order quantity price breaks.

MDA Personnel/BRAC

The 2005 Defense Base Realignment and Closure (BRAC) Commission approved recommendations directing the realignment of several MDA functions from the National Capital Region (NCR) to government facilities at Fort Belvoir, Virginia, and the Redstone Arsenal in Huntsville, Alabama. Specifically, a Headquarters Command Center for MDA will be located at Fort Belvoir, while most other MDA mission and mission support activities originally in the NCR will be realigned to Redstone Arsenal.

In support of these realignments, MDA has awarded contracts to construct two new facilities: a \$38.5 million Headquarters Command Center (HQCC) at Fort Belvoir, and a \$221 million addition to the Von Braun Complex at Redstone Arsenal. Construction of the HQCC will begin this spring, with expected completion and occupancy in Fall 2010. The HQCC will accommodate 292 positions. Construction of the Von Braun III project is already underway. The Von Braun III facility is being constructed in two phases – with the first phase being readied for occupancy in the summer of 2010, and the second phase scheduled for completion and occupancy in the summer of 2011. The transfer of government and

contractor positions from the NCR is in progress. MDA has already transitioned approximately 1,300 of the planned 2,248 positions to Huntsville / Redstone Arsenal.

Conclusion

MDA will strive to improve the effectiveness and efficiency of developing the BMDS. While we are addressing challenges, our record of 16 of 18 intercept attempts over the past three years sends a clear message to potential adversaries considering the acquisition of ballistic missiles. But more work is needed to improve our oversight, collaboration with Combat Commanders and the Services, test planning, and program execution.

Proven missile defense assets can contribute to strategic non-proliferation and counter-proliferation objectives by undercutting the value of offensive ballistic missiles. Deployed missile defenses bolster deterrence, give confidence to our allies and friends by reducing the opportunities for adversarial intimidation or coercion. In countries and regions where offensive missiles have already proliferated and regional tensions have risen, missile defenses can play a key role in the strategy to extend deterrence by creating uncertainty in the minds of the potential adversaries of the effectiveness of an attack on U.S. or allied retaliatory military power. If hostilities break out, missile defenses can limit damage to U.S. and allied critical infrastructure, population centers, and military capabilities for responsive operations.

Again, I greatly appreciate your support as we address issues associated with the BMDS, and I look forward to answering your questions.

NK LAUNCH

Mr. DICKS. Without objection, your complete statement will be placed in the record.

How is the Agency supporting the response to the pending North Korean missile launch?

General O'REILLY. Sir, first of all, I can respond to that from an acquisition developer perspective, since we developed the system that will be used. The actual deployment tactics are developed by PACOM, STRATCOM and NORTHCOM. ———.

Mr. DICKS. One of the articles says that they might, parts of the missile, one would drop on one side of Japan and the other would drop on the other side of Japan. Can you explain that?

General O'REILLY. Yes, sir.

Mr. DICKS. Would that be a space launch?

General O'REILLY. Either one, either space launch or ICBM. It is a three-stage missile, and the first stage would fall in the Sea of Japan, the second stage would most likely fall in the Sea of Japan, but the upper stage would fall on the other side of Japan, east of Japan.

We have three Aegis ships on station, two in the Sea of Japan and one east of Japan for that reason, so that we can get an early assessment.

Mr. DICKS. Mr. Young.

Mr. YOUNG. Thank you, Mr. Chairman.

General, at what point would the United States make a determination to intercept this vehicle?

General O'REILLY. Sir, if it is an ICBM, the Secretary of Defense has that authority to release the weapon, the weapons up at Fort Greely, Alaska, or at Vandenberg Air Force Base. ———.

They have a command and control system for their ballistic missile defense that is integrated with ours.

So not only are we aware of what they do, we actually share data between both of our systems and we have a forward-based radar, similar to the one we just placed in Israel, in Shiriki, Japan. The Japanese have access to that data. So we do share data, and our command and control is integrated.

Mr. YOUNG. So despite some of their pretty definite statements about how they would react, you don't think—they are not going to be trigger happy, they will coordinate and do whatever is agreeable to the U.S.?

General O'REILLY. Sir, our discussions in the past have been around policies of self-defense. So the way our missile defense systems—and they use ours, and we work with them on theirs—our missile defense systems operate based on defended areas. ———.

Mr. YOUNG. Well, just one last comment, as the technology grows from countries that are not particularly friends of ours, I think it establishes over and over again the importance of our own missile defense capability.

Thank you very much for keeping us as robust as you can.

Mr. Chairman.

Mr. DICKS. Mr. Moran.

IRANIAN CAPABILITY

Mr. MORAN. Thank you, Mr. Chairman. Let's bring up the other hot topic at this point you are on—and it is actual capability of militarizing their nuclear capability—and get your latest assessment of the timing and our capability of defending and the extent to which the location of missile defense batteries in Eastern Europe affects our defense posture vis-a-vis Iran.

General O'REILLY. Sir, in terms of—I can't speak, I am not a subject matter expert in the area of their payloads, their nuclear capability that they are working on; but I can talk about their delivery system, the missile delivery systems. ———.

PROTECTION OF EUROPE

Getting back to protecting Europe, though, these missile systems, as I said, they can hit southern Europe, the Shahab-3, they can hit Turkey, they can hit Greece, they can hit southern Italy. ———.

From a long-range threat, if they are beyond 2,000 kilometers, at that point, you need our long-range system today, which would be the GMD program. And we have proposed 10 in the country of Poland, northern Poland; and it also would be with a—it needs a fire-control radar, and that would be the one we would propose for the Czech Republic.

Short of that, we don't have capability to protect against a long-range threat today in Europe.

Mr. MORAN. But since the only real threat of all of those that you mentioned, if there was only a minimum level—you can assume we have a minimum level of intellect on the part of the Iranians—it would be the Iranian threat to Israel, not to Europe or anyplace else, and Iran far more than Syria.

PROTECTION OF ISRAEL FROM IRANIAN MISSILES

Could you just address briefly—you don't have to be as comprehensive, although it was very informative, the response to my first question. But we have been funding Arrow missile defense system, and we have our own missile defense systems that would work in collaboration with Israel's.

Could you just address our ability to thwart any possibility of a missile attack from Iran to Israel, since that is the only real threat that you mentioned in your list?

General O'REILLY. Yes, sir. I would defer to Admiral Blair and the Director of National Intelligence. ———.

Mr. MORAN. Are we in progress of funding that program?

General O'REILLY. Sir, last year 30 million was appropriated for the Arrow-3 program. We have reviewed that with them last year. Based on their data, that is the most economic solution for the state of Israel. We have not had the opportunity to do an independent assessment.

Previous developments have cost twice their initial assessment and the original Arrow cost twice of what they are said it would take. So we have some concern with the cost estimate.

However, my main concern about that system is, it is a very technically complex design, more complex than we have ever—more complex than we have ever attempted in our developments. Our es-

timates and independent estimates I have asked for indicate that it would be available 5 years or more later than what they say it would be. They are on a very fast track. I do not believe it is a credible schedule.

And so what we have discussed with the Israelis is to give them capabilities sooner while they continue to develop.

But to directly answer your question, sir. Yes, we are committed to fund the Arrow-3. However, I would recommend that we have a program agreement ahead of time to protect U.S. intellectual property rights and use rights for the results of that program.

Mr. DICKS. The gentleman's time—

Mr. MORAN. That was very informative. Thank you, General.

Mr. DICKS. Mr. Frelinghuysen.

CHINESE MISSILE THREAT

Mr. FRELINGHUYSEN. Thank you very much.

General, I made note of your comment relative to the North Koreans and the Iranians that what they are working on, and you said it, reflects a very sophisticated design. There is sort of a view out there in the public that what we are sort of dealing with here is a backward people, and what they are working on is crude and would be unlikely to represent a threat.

I think you are sort of giving us a little bit of a wake-up call that, indeed, they are working on some fairly sophisticated devices.

I would like to turn my question to stories that are circulating in the media that China is working to modify their land-based DF-21 ballistic missiles for use against our carrier assets. I am sure you have seen some of those articles. It was quite alarming.

Tell me if I am correct: The idea is to have a satellite or over-the-horizon radar, or maybe a UAV, guide these heavy missiles towards a carrier battle group at a very high speed.

And from the article, and let me quote, because the missile employs a complex guidance system, low-radar signature and maneuverability that makes its flight path unpredictable, the odds that it can evade tracking systems to reach its target are increased. It is estimated the missile can travel at Mach 10 and reach the maximum range of 2,000 kilometers in less than 12 minutes.

That is pretty scary, you know. Can you comment on that.

General O'REILLY. Thank you, sir. It is actually more scarier than that.

Mr. DICKS. Would the gentleman yield for just a second.

Mr. FRELINGHUYSEN. Please, Mr. Chairman.

DEFENSE OF MARITIME FLEET

Mr. DICKS. Well, the defense would be—Aegis would be only defense? Or is there no defense?

General O'REILLY. Sir, what we would propose—

Mr. FRELINGHUYSEN. There is a view that there is no defense.

Mr. FRELINGHUYSEN. Wow.

Thank you, Mr. Chairman.

Mr. DICKS. Thank you.

Mr. Rothman.

Mr. ROTHMAN. Thank you, Mr. Chairman.
 Good to see you again. Thank you, General. Thank you, Chairman.

GROUND/BOOST PHASE INTERCEPT

What would a defensive system that would either get the missile on the ground or in the boost phase, what would it look like?

General O'REILLY. There are actually multiple architectures that could do that. The first thing you have to do is see these missiles soon, as soon as they have been launched, the earlier the better.

It just so happens, last Thursday, we had the first time where we used the Predator, working with the Navy—we had two Predators off of Los Angeles. And we had a test of an intercept of a Lance missile using Aegis, but the Predators were out there, and they actually watched the missiles being launched, which is the first demonstration that UAVs actually can be used in a missile defense mode.

Mr. ROTHMAN. But what would our kill vehicle be?

General O'REILLY. ———.

Mr. ROTHMAN. And when do you expect that to be ready?

General O'REILLY. We will flight test it next week, as a fully configured airborne laser. It flew last year and had great success with the three lower-level lasers.

Mr. ROTHMAN. The Chinese, if you know, General, are they up to our level of progress on lasers?

General O'REILLY. ———.

Mr. ROTHMAN. And the North Koreans, to get back to them, my guess is that we could take out those rockets on the pad. We certainly had enough notice, we watched them be carried up to the pad and sit there and be fueled, that—unless you tell me we don't have that capability.

Do we have the capability to take them out on the pad now?

General O'REILLY. Sir, I am not the subject matter expert for ground attacks, honestly, for the forward offensive operations.

But what we currently have right now is a choice. When you know that an ICBM is being stacked and you can observe it, it is either preemption, as you are questioning, sir, or it is retaliation after a launch has occurred.

We are trying to offer a third——

NK MISSILE TEST

Mr. ROTHMAN. No, I agree. I just want to get a couple more questions before my time—what do you speculate or know to be the North Koreans' intention in this flight and why have they given us advance notice?

General O'Reilly. Sir, they are behaving as if it is required because of a space treaty. If you are going to launch, you are required—by a certain point of time you are required to notify of a peaceful launch—and especially booster drop zones for warnings to mariners or aircraft; and that is international convention. So they are following international convention.

However, U.N. Security Council Resolution 1718, prevents them from participating in this type of activity. So even though they are doing it, it is in violation of a U.N. Security Council resolution.

Also, the South Koreans have publicly announced that they are working with putting a satellite into orbit with the Russians. And the Russians offer that service; they have been doing it for decades, putting others—and so it might be that they, in fact, are trying to compete with South Korea in this area.

But what we have noticed about the North Koreans is not so much that they are going to have the capability to attack the United States, or that would be rational for them; it is their arms sales, and they do make a significant amount of profit by selling these weapons around the world.

Mr. ROTHMAN. Thank you, General.

Thank you, Mr. Chairman.

Mr. DICKS. The gentleman's time has expired.

Mr. TIAHRT.

Mr. TIAHRT. Thank you, Mr. Chairman.

WORLD BALLISTIC MISSILE THREAT

General O'Reilly, you said earlier, I think, that outside of China and Russia there are 5,600 ballistic missiles?

General O'REILLY. Outside of United States, China and Russia, yes, sir, today.

Mr. TIAHRT. We had heard 3,000 before, but I think 5,600 really emphasizes the risk that is involved here.

Now, I think—Iran, have they put a satellite in orbit yet or are they attempting to do that?

General O'REILLY. Sir, they did, on the 2nd of February.

Mr. TIAHRT. And China—or excuse me, North Korea is attempting to put a satellite into orbit now, they say?

General O'REILLY. That is their claim, yes, sir.

Mr. TIAHRT. So if you can put a satellite into space, how much more difficult is it to put a warhead at a certain point on the ground?

General O'REILLY. Sir, the only other technology you need is reentry technology. And Iran has demonstrated, and North Korea, that they have perfected that ability, to withstand the reentry.

Mr. TIAHRT. They have the algorithms, and so that capability is there?

General O'REILLY. Their technical capability is there. They have shown on every—the most difficult in all of it is staging, and they have shown they can do controlled staging now.

Mr. TIAHRT. ———.

General O'REILLY. Sir, the issue with missile defense is that each of our missile systems has been developed against a particular class of target, because each of these targets has different physics characteristics.

So we have—PAC-3 that works very good in the atmosphere against not only ballistic missiles, but also against cruise missiles. The THAAD and Aegis are best for 1,000- to 3,000-kilometer threats. And beyond that it is GMD.

However, boost-phase intercept or early-ascent intercept, as I was referring to before, it doesn't matter which class, it is most versatile because it would destroy the target, no matter what its range was.

DEFENSE AGAINST MULTIPLE LAUNCHES

Mr. TIAHRT. So you think the ABL is the most versatile?

General O'REILLY. It can handle the largest raid size.

And I apologize, sir, I have not talked about raid size. That is another issue. We have talked about certain threats. But when you get into raid size, countries have shown they have practiced launching 8 or 10 at a time.

Mr. TIAHRT. Multiple launches?

General O'REILLY. Multiple launches simultaneously, and ABL would be in the best position to take on multiple launch.

Mr. TIAHRT. Is our test program—you just pointed out an individual launch versus a multiple launch. Is our test program for the ABL including this more versatile capability, or are we just focused on a single launch so far in our test requirements?

General O'REILLY. Sir, we have set up knowledge points that are technical milestones. The first technical milestone is against the single launch.

However, we are going through a replan of our test program, and that is one of the capabilities we need to demonstrate with the ABL a multiple launch scenario. We have done it now with the Aegis program, two different types of Aegis missiles. We have launched two interceptors against one target with Aegis.

So in all of our missile programs, we are planning for multiple intercepts in the future.

Mr. TIAHRT. Is it in the current plan for ABL to test against multiple targets?

General O'REILLY. Sir, our planning up till now is just the first intercept, and we haven't developed—we are developing now the plans that—

ABL TESTING

Mr. TIAHRT. So, if I understand this right, we know we have—Iran and North Korea have done multiple launches, and so we know what the threat is. And you have explained how they can bring munitions up, and China can do that, as well. But our test program is only against an individual target.

Do you think we should have a more robust, test program for the ABL than what we currently have authorized and funded?

General O'REILLY. Yes, sir. We are planning—as we speak, we are working with the operational test agencies, AFOTEC (Air Force Operational Test and Evaluation Center) for the Air Force and the Director of Operational Test and Evaluation, and the Army and Navy, in order to develop that very test plan that you are talking about.

We expect to deliver this plan in May, and it will be a comprehensive plan for all of our systems, including ABL.

Mr. TIAHRT. But it hasn't been authorized yet?

General O'REILLY. We have not requested that level of funding for multiple intercepts.

Mr. TIAHRT. But the threat is real?

General O'REILLY. The threat is real, yes, sir. And that is being taken into consideration with this test plan.

Mr. DICKS. The gentleman's time has expired.

Mr. Bishop—now, we are going to keep this going because we are going to have a motion to recommit at some point. So we will have another 15 to 20 minutes.

Mr. KINGSTON. One vote, Mr. Chairman?

Mr. DICKS. A whole series of votes, but I think we should try to keep this going. People who can go up, go up and vote and come back, and then we will keep moving through this.

Mr. Bishop.

NK AND IRANIAN MISSILE TECHNOLOGY

Mr. BISHOP. General, I have served on the Intelligence Committee and actually traveled to North Korea toward the end of the Clinton administration and engaged in talks with the high-level North Korean leaders with regard to their missile systems and the sale of arms to Iran and Syria and some other places where they were selling them.

And, basically, their position was that they weren't able to feed their people because they just couldn't provide adequate food, and so they had to raise funds in the best way that they could. And the only thing they had to export was missile systems, and that is what they are doing, because they were proud and they wanted to be self-sufficient.

Self-reliance is their motto. And they didn't really care who they sold them to; they just needed to get revenue to take care of their people. And if we wanted to buy their missiles, they would sell them to us instead of selling them to the Iranians.

But I noticed in your testimony that the Iranians basically have performed the same kinds of tests that the North Koreans are performing.

WORLD BALLISTIC MISSILE THREAT

General O'REILLY. ———.

And as these missile systems proliferate, there are over 20 countries beyond just Iran and North Korea now that have them, but they are the major suppliers.

Mr. BISHOP. That is in the 5,600 that you referred to?

General O'REILLY. Yes, sir.

Mr. BISHOP. Who are they?

General O'REILLY. I can provide that for the record the number, the names of all the countries. But Libya is another one, for example, Syria, Pakistan, Vietnam. These are all countries, and there are over 20—I believe it is 23 today—outside of the United States, Russia and China.

So it does stress our systems, sir, and the quantities, when you look at raid sizes, even if we have a Patriot system at a location, the number of launchers today is over 500. So 5,600 missiles, but there are over 500 launchers. ———.

COST OF MISSILE DEFENSE SYSTEMS

So it is not only stressing, sir, in terms of the sheer inventory, but also, even if we have missile defenses in a location, we need to have enough capability to take on a large raid size.

Mr. BISHOP. Is that a function of resources on your part, to be able to develop that as well as the time that it will take to develop it?

Do you have the fiscal resources? Do you have the human resources with the technical skills to do that at a rate that would be necessary for us to be adequately protected?

General O'REILLY. Sir, today, we do not have the the capability to counter all of the threats I mentioned, so it does take diplomacy, nonproliferation and other aspects of it.

But to directly answer your question, this is part of my input into the new administration, and it is under consideration now on the budget next year. And those decisions have not been completed yet, but they are being taken into consideration by the administration on what it would take, over what period of time. ———.

Mr. BISHOP. How much does that cost?

General O'REILLY. A THAAD missile is \$10 million apiece, approximately, and an Aegis is approximately the same. But, sir, that is what is being taken into account as we speak.

HUMAN RESOURCES FOR MISSILE DEFENSE

Mr. BISHOP. What about the human resources? Do we have the scientists, the engineers, the people, the HUMINT personnel that will have to develop that architecture? Do we have those people in place?

General O'REILLY. Sir, I believe we have it in place, but it is very stressing. One of the benefits of the Missile Defense Agency, frankly, is that the national level of resources in science and engineering who must all be U.S. citizens to work on this for classification reasons.

I spend a lot of time in the schools today for this very reason. With respect to U.S. engineering students, I have been at Auburn, Tuskegee, Alabama A&M, Georgia Tech and others. We are looking in the South because the BRAC is moving a lot of jobs to the South.

But, sir, I am very concerned about this. And I do spend time in schools talking to deans of engineering for this very reason. We need to husband what capabilities we have today, and central development is about the best way to do it.

Mr. DICKS. The gentleman's time has expired.

Mr. Kingston.

Mr. KINGSTON. Mr. Chairman, Ms. Granger was here first, Mr. Chairman.

Mr. DICKS. All right. We will go right to Ms. Granger.

Ms. GRANGER. Thank you.

I want to return to Mr. Moran's questions concerning the Israeli development of the Arrow-3 missile, and you talked about your concerns. What I understood was, the proposed cost, Israel's projected cost, timeframe, I want to know if you would expand on that. And also the idea of using the ground-based SM-3 requirements at the time, could you address that?

General O'REILLY. Thank you, ma'am.

The design concept that the Israelis are proposing for the Arrow-3 takes all of the most sophisticated technical aspects of our current interceptor system and goes beyond that. THAAD, for example, was a 9-year development.

They are proposing to do it in 3, so even at the very high level, you can see they are proposing extremely rapid development of this that we have never been able to do, and with more sophisticated technology. I have asked MIT Lincoln Labs and Johns Hopkins APL to do independent assessments, and they have had the same results, they concurred that this is a very high-risk schedule. The concern is, there is need today or soon to have an upper-tier capability.

We have an existing missile, the Aegis missile system, that is proven on board ships. But we actually test our standard missiles (SM-3) on the land anyway. So it is not a very high risk to deploy them, to develop land-based launchers for this.

We are continuing to do a concept development of this land based SM-3, to be used for the Israelis, if they need this capability sooner, which we believe they will; also there are significant applications for the United States and remote sites such as Guam, Shemya, Alaska, Thule, Greenland and so forth where this would give you that capability also.

U.S. STRATCOM has asked me, independent of the Israelis, to look at the land-based SM-3 application, and we are doing that now, ma'am.

Ms. GRANGER. Thank you.

I yield back my time.

Mr. DICKS. Mr. Hinchey.

ISRAEL MISSILE DEFENSE

Mr. HINCHEY. Thank you very much, Mr. Chairman.

General, thank you for all of this information. It is really very fascinating, and it makes it a lot clearer to us the kinds of things we have to do in order to strengthen our security here and the security of our naval operations and other places around the world.

I am wondering if you can tell us what the missile capability of Israel is right now.

General O'REILLY. ———.

ALLIED MISSILE CAPABILITY

Mr. HINCHEY. What is their capability for missile action, not just defense, but for launching missiles?

General O'REILLY. Sir, I know they have the Jericho and other systems, but I am not a subject matter expert on that.

Mr. HINCHEY. Why is that?

General O'REILLY. Because they are not in our threat list, and we don't study them, honestly, sir, as far as how to counter——

Mr. HINCHEY. Who does study them?

General O'REILLY. The Intel Community can provide that in detail, sir.

Mr. HINCHEY. But you don't have the ability to tell us what their——

General O'REILLY. No, sir. I have not studied their offensive capability for the purpose that we are focused on, defensive capabilities in MDA.

Mr. HINCHEY. What about the missile capability of some European countries, France, say, for example?

General O'REILLY. Missile defense capability, sir——

Mr. HINCHEY. Not missile defense capability but missile launching capability.

General O'REILLY. Against our allies, sir, we have not studied their capability.

Mr. HINCHEY. Not studied them. Why is that?

General O'REILLY. Again, sir, we are focused against near-term threats, and our allies are not near-term threats, sir. But I will tell you that—

ALLIED MISSILE CAPABILITY

Mr. HINCHEY. I can't help but be amused by that. I mean, it just is amazing.

Mr. DICKS. But the Intelligence Community does look at this very seriously.

General O'REILLY. Yes, sir.

Mr. DICKS. This is kind of a division of responsibility.

Mr. HINCHEY. I understand that, and that is a question that we can ask them. But this is a situation that ought to be—

Mr. ROTHMAN. Will the gentleman yield?

Mr. HINCHEY. It ought to be of equal concern, you know, to you, I would think.

Mr. ROTHMAN. Will the gentleman yield for one question? Do we have the missile defense scenario—

Mr. HINCHEY. Yes, I will yield.

Mr. ROTHMAN. Thank you, Maurice.

A missile defense scenario against Great Britain?

General O'REILLY. No.

Mr. ROTHMAN. Thank you.

Mr. DICKS. The gentleman's time has expired. I don't want the gentleman to miss this vote.

You haven't voted yet, have you?

Mr. HINCHEY. No, I have not.

Mr. DICKS. I would love for you to go vote and come back.

Mr. Kingston.

DEFENSE OF U.S. AGAINST BALLISTIC MISSILE THREAT

Mr. KINGSTON. Thank you, Mr. Chairman.

General, I think you have covered this in bits and pieces, but I just wanted to get this in, so I apologize if you have to repeat yourself. But if a ballistic missile was launched towards the United States, what system do we have to defend ourselves? And what is the probability of success? ———.

Mr. KINGSTON. But we don't have that on China.

General O'REILLY. Sir, we are not aimed at China.

EVOLVING THREAT TECHNOLOGY

Mr. KINGSTON. I think a major takeaway, though, here is that in the world of technology, evolving almost on a daily basis, that we absolutely have to stay in the game and that, if we are safe, say, today, April 2009, April 2010 could be a totally different scenario because of the technology that is changing. Is that accurate? ———.

Mr. KINGSTON. Do I have time for another question, Mr. Chairman?

Mr. DICKS. Yes, one quick one.

WHAT PRIORITY MISSILE DEFENSE

Mr. KINGSTON. Let me ask you a philosophical question. I am not necessarily in this school of thought, but in terms of global warming, I have great respect for those who believe in it because, if global warming is true, then it is maybe the only issue that is out there, because it is certainly a threat to everything.

So just sort of using that analogy, in terms of this missile race, if it is accurately called that, that we are in, what kind of priority should Members of Congress and this committee, particularly, consider it? The top number-one priority, even before the economy? Or is it just something we need to be aware of and support?

General O'REILLY. Sir, I would believe terrorism is the concern, and the use of missiles as part of a terrorist act is a very high probability. Whether a nation-state would strike us I believe is a much lower probability.

The concern with the proliferation is actually the security of all of these systems out there. How many people does it take? It takes a squad of less than 20 people to launch one of these—so extremist parts of organizations or militaries or failed states could launch these system.

So, to fully answer your question, sir, I talked about the long-range threats; we are also responsible for short-range threats. When we test THAAD, for example, we always test it on a barge off of Kauai to simulate a launch, an asymmetric-type attack where a small group off a container ship or something could launch a Scud or a shorter-range system, a more available system, towards the United States.

We do not have a defense in place today against that. We have been developing the architectures. This committee has funded our studies for that.

Mr. KINGSTON. Well, let me just get a one-word answer. On a scale of one to 10—unlike global warming, which we can discuss publicly, this is a classified briefing, and so much of this information is classified, and we can't discuss it in the ordinary public forum—but where should this be rated in terms of—right now, polls show over and over again the economy is the number-one issue. Where should this be, in your world, from your point of view?

General O'REILLY. Sir, from my point of view—

Mr. KINGSTON. On a scale of one to 10.

General O'REILLY. The odds, over the next decade, that our deployed forces or a U.S. area of interest is going to be vulnerable to an attack by ballistic missiles is extremely high. But that is my point of view from what I see. I am not an intel person, sir.

Mr. DICKS. The gentleman's time has expired.

Now, this is what we are going to try to do here. We have two votes coming right up and then a motion to recommit. So let's go up, all of us, and we will come back with Ms. Kilpatrick. We will make this vote and the next vote and then come back, because we are going to have a motion to recommit, and that will take 25 minutes, and we can pretty much wrap this up. Okay?

[Recess.]

Mr. DICKS. The committee will come back to order.

Ms. Kilpatrick, we recognize you, for 5 minutes.

NORTH KOREA MISSILE LAUNCH

Ms. KILPATRICK. Thank you, Mr. Chairman.

Good morning, General. How are you?

I have a few things, I think. North Korea is where I want to go first. _____.

General O'REILLY. _____.

That is what I am used to seeing. However, if you had a globe and you launched it over the Pole, I would have to get back to you, ma'am, if it could actually hit Israel, but it would hit a large part of _____.

[The information follows:]

Based upon the intelligence assessed range of the North Korean TD-2 2-Stage and 3-Stage variants, the TD-2 could reach Israel and either portions or all of Europe depending on the threat variant.

Mr. KILPATRICK. South America, U.S. and other territory.

You also said earlier, or they said in this testimony, the private, confidential testimony, that they are prepared to shoot down any U.S. reconnaissance asset interfering with the launch.

Two things—the launch is permissible or meets a standard in the international realm, but I think you also said in the U.N. treaty it is against the law, it is in violation.

General O'REILLY. Yes.

Ms. KILPATRICK. Two things, then. Will the U.N., if anything, take action, number one?

And if they are bold enough to say North Korea will shoot down any U.S. reconnaissance—and the back of my mind is ringing Iran and others—they feel like they have the capability, the permission, and the know-how to do just that, don't they? _____.

Ms. KILPATRICK. Oh, that is China. Okay. That is a good thing. I have been wrestling with that.

Are we ready to, as they said, shoot down any North Korea missile that comes our way and South America's way and anything in this part of the hemisphere?

General O'REILLY. The actual answer to that, ma'am, is the way the system is set up, our ground-based midcourse defense and our ballistic missile defense system, is the system—we define the defended area, and our defended area is the United States. If there is an object coming into that defended area, regardless of what it is, we will shoot at it. That gives us defense against something coming in.

If it is outside our defended area, like Mexico or some other place, we will not engage it. The system only engages—

Ms. KILPATRICK. If it is coming towards us.

General O'REILLY [continuing]. If it is coming towards us.

Ms. KILPATRICK. But will you have to hit it over South America or in airspace? I mean, do you know that? Can the technology tell you how precisely where to hit it to avoid the other countries?

General O'REILLY. Yes, ma'am. Yes, we do know what the debris damage would be. Two things; one is that, when you intercept a missile like that, the debris goes in the direction of the original

missile, where it was heading. It just falls about 10 percent short. So if it was heading towards Seattle and we intercepted it, the debris would fall in the ocean short of—

Ms. KILPATRICK. Don't use Seattle—

General O'REILLY. Probably a very bad choice of—

Ms. KILPATRICK. Right, bad choice.

General O'REILLY. So, Portland.

Ms. KILPATRICK. Anywhere in the U.S.

General O'REILLY. Yes, ma'am. In the case of North Korea, our intercept zones are over the Pacific Ocean. But, again, if it was going into an area outside the defended area of the United States, we would not engage it. The system watches it, but it doesn't engage.

Ms. KILPATRICK. Thank you, Mr. Chairman.

Thank you, General.

ABL/KEI PROGRAMS

Mr. DICKS. Thank you.

What specific criteria—affordability, operational, effectiveness, et cetera—will the Department use to make the down-select decision between ABL and KEI? And why don't you tell us a little bit about the KEI program?

General O'REILLY. Sir, the strategy is that, after we have met successful technical milestones for both programs, there would be an evaluation of the most advantageous program to proceed with. However, unfortunately, for the KEI program, there are some early milestones that still have not been achieved, and ABL is closing in on its final milestone, which would be a shoot-down. So, between the two programs, they are several years apart in maturity, at this point.

KEI, over the past year, has suffered—as I was saying in my opening remarks, it is one of the programs that I am concerned about with quality control. When they were testing their first and second stage on the ground, their booster, they, in fact, had failures, where the rocket motors themselves burst under pressure, which we then had to go back. We have repaired it, we have determined what the failure was, the defect, and we have now successfully tested it. However, then we had problems with their thrust vector controller that controls the nozzle at the end of the KEI booster. We have had a series of failures there. And in our most recent test, new failure mechanisms also emerged.

So we are still struggling with the very first milestone, which would be a launch of the KEI without an intercept or a kill vehicle on the front end. So, from a maturity point of view, ABL is several years ahead of KEI.

Mr. DICKS. ———.

General O'REILLY. ———.

However, when we looked at the program, we found that we were testing this high-powered laser against some instrumentation missiles; yet we weren't going forward and shooting a target, even though we were paying for everything except a target, leading up—these were several tests that lead up to a final shoot-down.

So what we are looking at doing, what I would like to do, is to fly targets even on those earlier tests, so that, in fact, we can learn

even more. If we are not successful on shooting down, we gain more data from that. So what I have introduced is a minimum of two more targets on earlier tests that were going to lead up to the previous target. _____.

Mr. DICKS. We are still not sure about the budget, though, for 2010?

General O'REILLY. As for 2010, sir, most of the activities I have just described are in 2009.

Mr. DICKS. So, really, it is going to be, in some ways, how well this thing does on these tests that will kind of determine the future of this program.

General O'REILLY. Yes, sir.

Mr. DICKS. All right.

Ms. Kaptur.

EUROPEAN MISSILE DEFENSE

Ms. KAPTUR. Thank you, Mr. Chairman.

And, General, we apologize for all these votes. You can tell we don't control the schedule here.

My questions largely concern the European missile defense system and the status of various agreements.

And one of my first questions really is, why was the decision made to move forward on a bilateral, rather than a multilateral, NATO-based set of decisions, for Poland and Czechoslovakia relating to missile defense?

General O'REILLY. Ma'am, there are two answers there. One is that we do have a NATO missile defense activity that has been going on for over a decade. In two particular areas, the command and control system, the air command and control system, the U.S. has had a representative on that program to build a command and control system for anti-aircraft, but also it works with missile defense. So we have been doing that for over 10 years.

Second of all, they have the Active Layered Theatre Missile Defense Program, which is also underway—it is at least 5 years old. I would have to get the exact data on when it started. However, the deputy program manager of that NATO program works for me, is a member of the Missile Defense Agency. We fully support those activities. Those activities are aimed at NATO command and control over different assets and to study different missile defense the architectures, to select the best one.

Also, the Committee of North Atlantic Armaments Directors, the CNAD part of NATO, has been doing studies at the direction of the NATO ministers to study missile defense architectures and determine their feasibility. And the different study panels—there are several which my personnel not only participate on but actually lead the panels.

So we are very engaged with working with NATO. Our entire system is designed with NATO protocols from the ground up so that we can interface effectively. We use the NATO standards, so we can work directly with NATO.

In the area of the Czech Republic and Poland, many of the weapons systems that NATO has today were done just that way. The countries will come forth and contribute what technologies and

what capabilities they have. That is a fairly standard way to contribute military capability to NATO.

So this was more of a standard path that we were using where we were going to—the previous administration's proposal, was that the countries involved in the upper-tier defense of NATO would be the United States; Denmark, which works with us on the radar up in Thule, Greenland; and the U.K. currently are all involved. And they have the Fylingdales radar in the U.K., which is a missile defense. And then the Poles and the Czechs were offering their land and their security and the contributions they were making.

And so we would contribute the upper tier. But that is an incomplete defense system. You still need a lower-tier system, which the other programs I was telling you about are looking at. So this was a contribution to NATO, but it does need other contributions from other countries to make it whole.

Ms. KAPTUR. Well, several of our European allies have expressed concern about the way the decisions and negotiations were conducted with Poland and the Czech Republic, as not having gone through NATO. Are you saying that the decisions relating to placement and so forth came through NATO?

General O'REILLY. No, ma'am, they did not. But it is similar to the MEADS program and some of the other programs we have with other countries. They also did not come through NATO?

Ms. KAPTUR. Do you think this could potentially be a point of conjecture within the alliance, a divisive point within the alliance?

General O'REILLY. Ma'am, last year at the Bucharest summit in April, all 26 countries announced support for the U.S.-proposed upper-tier system. So we have not seen that it is divisive. I have been at NATO many times and talked to the Secretary-General, and he has said the opposite, that it is a unifying—because the threat is to all the countries, and it is a unifying issue.

Ms. KAPTUR. Well, there is conjecture within both Poland, for sure, and I can't speak as much for the Czech Republic, on this whole system right now. And public opinion is shifting within the nations themselves.

My question is, what formal requirements does NATO have for missile defense in Europe? And is it true that the U.S. taxpayers are going to, if it happens, foot the entire bill for this?

General O'REILLY. Ma'am, from the point of the view on the U.S. taxpayers, it has been our proposal to—we would not pay for all of it. There is a substantial operations and support cost that the host nations have agreed to—the security of the systems, the land itself, and so forth. There is a lot in those agreements, that they contribute.

One aspect of this, though, is the fact that the current proposal for the ground-based interceptors in Poland, provide a substantial coverage of the United States also. So there is a benefit directly to our defense by having it there, and that is part of the justification for why the U.S. would pay a large part of that, the majority of it. One, we have the technology, but, two, it is directly beneficial to the United States.

What you would like to do for a launch from Iran would be to have an early intercept attempt and, if it is not successful, then use our system in Alaska for a second attempt. So this gives us a very

good first shot at anything coming out of Iran, which was the threat they were concerned about.

Mr. DICKS. Would you yield on that point?

Ms. KAPTUR. I would be pleased to.

Mr. DICKS. There are some people who don't agree with that, right? Aren't there some people who say we picked the wrong missile for a defensive missile for Poland?

General O'REILLY. ———.

The concern there was, when IDA did an independent assessment, what would it cost for 30 years of defending Europe, using Aegis ships the cost is \$28 billion or greater. From the proposed Polish and Czech land-based system, it would be \$14 billion. So, from a cost point of view, it is substantially less expensive to have this fixed site. However, there are other alternatives we have seen, including a land-based SM-3.

Ms. KAPTUR. I just wanted to say, with the politics in that region, this issue is—the Czech Parliament hasn't been able to clear it now, as I understand it, and there is changing public opinion in Poland. We have the issue with Russian relations and a new administration trying to embrace that whole situation there.

I just want to be clear. What has NATO agreed to with regard to missile defense in Europe? And what formal requirements does NATO have—formal, underline “formal”—for missile defense in Europe?

General O'REILLY. Formally, ma'am, in their joint statement last year at the Bucharest summit, they stated they recognized there is a missile defense threat, which is part of a requirement. They also stated that they recognize the benefits from a U.S. system to counter that threat.

They also established, to your point, studies to report at this summit, which is meeting as we speak, to look at what the formal requirements are for lower-tier capability that has to go underneath the system that we were proposing.

So, to answer your question, they have acknowledged the threat in a formal way, and they have also formally studied or are formally studying what the requirements should be. They have established that the command and control for a missile defense system in NATO—this is a formal requirement—needs to be in place by 2012 so we have a design. And then they have a second command and control phase to look at a more advanced command and control for upper-tier systems, which is still under study at this time. And I have personnel on those panels——

Ms. KAPTUR. General, to what do you attribute the declining popularity of this within the Eastern European community?

General O'REILLY. Ma'am, I can't directly account for that. I acknowledge I have spent a lot of time there personally addressing with mayors and their members of parliament and such, and there is a substantial opposition to that. And my direct contacts have been at the government level.

But we are restricted from using any funding until those matters or at least the ratifications are complete. Our latest understanding is that the Czech Government has deferred the vote in the lower parliament. Their upper parliament has approved going forward with the radar in the Czech Republic. They have deferred the vote

in the lower house until after their elections in the fall. So this will be a substantial delay to the current plans, as a minimum.

Ms. KAPTUR. I would just state, in closing, that I would hate to see where technology led the way versus geostrategic interests. And I hope that our State Department, I am sure with our Ambassadors and so forth, will help us to iron this out. I just think it is very sensitive.

And I thank you very much, General.

Mr. DICKS. The time has expired.

Ms. Granger.

Ms. GRANGER. I don't have any questions.

Mr. DICKS. Mr. Kingston.

LTG O'REILLY'S MAJOR POINTS

Mr. KINGSTON. Thank you, Mr. Chairman.

General, in a few hours we will all be voting on a budget, and it will be, I don't know, a thousand pages; I am not even sure how long. But most of us will get 30 seconds to explain why we voted "yes" or "no," maybe 2 minutes if we are lucky, and we will have three points that we can make in support or against the budget.

What are your three points that you can walk away from here with?

General O'REILLY. Sir, number one is the threat is growing, and the approach to the threat needs to be a multidimensional use of our power. As you were saying, ma'am, it is a combination of diplomacy, policy, and the technology that I bring forward.

And the third point is, we need to invest in staying in front of the type of threats we have heard about this morning. The reason we have capability today was research and development work occurring 10 or 15 years ago. And there is a need for us to have the alternatives so an administration has various options in how to react to these different types of situations.

Mr. KINGSTON. What is that investment level, the dollar amount?

General O'REILLY. Sir, my budget in fiscal year 2009 was \$9.3 billion. The budget in 2010 is under deliberation at this time.

Mr. KINGSTON. What do you hope it will be?

General O'REILLY. You know, sir, to be straightforward—

Mr. KINGSTON. You didn't get your four stars by speaking needlessly, did you?

General O'REILLY. No, no. To be honest, this administration has asked me very pointed, very good questions along the lines of which we have discussed this morning. Specifically—and so, from that, it depends on the policy that you are going to move forward with. _____.

Mr. KINGSTON. You know, this is a numbers and a dollars committee. And it would be useful to us, as this process goes, if you circled back and say, "okay, it was \$9.3 billion last year; the proposal is \$11 billion, whatever, we are comfortable," and maybe communicate that beyond the chairman and ranking member so the rest of us know, if that is possible, when the time is appropriate.

The other thing, getting back to Ms. Kaptur's and your description of multidimensional defense, it would be nice to know, also, is there an appropriate ramp-up or adjustment in the diplomacy—do you talk to the State Department, for example, and are they com-

fortable? Because if you are going around talking to European NATO mayors and allies and so forth and we are losing ground on the need for this for them, maybe the State Department budget has to reflect that we have to do a better job. And so it would be nice to know that, on the three levels, that there was consideration with the others.

General O'REILLY. Sir, thank you for bringing up that point. I work very closely with the State Department, both under the past administration and the current administration.

Our activities in the Missile Defense Agency are technological only, but when I talk to those mayors and so forth, there is always an Ambassador right next to me, and I am under his guidance, or an Under Secretary of State.

So we have had in the previous administration and we continue to have in this administration very close coordination on this, so that it is, in fact, the U.S. Government and not just one agency within the government that is interfacing with our allies on the international scene.

Mr. DICKS. The gentleman's time has expired.

Mr. Rothman.

FUNDING ISRAEL MISSILE DEFENSE

Mr. ROTHMAN. Thank you, Mr. Chairman.

General, in the 2009 fiscal year budget, this committee, as you indicated earlier, appropriated \$30 million for the Arrow-3. And I understand that you are working to enter into an agreement with the Israelis, among other things, to protect U.S. intellectual property rights to whatever is developed in that program.

I know it takes two to tango, meaning the level of cooperation you get from the other side is important, but do you have any notion as to when you think that agreement will be completed so that the money can be appropriated, as was the intention of our committee?

General O'REILLY. Sir, I was in Israel 5 weeks ago to begin that negotiation, but I couldn't move forward in good-faith negotiation without knowing what the budget and the policy of the new administration was. They are formulating it now. I am prepared and I have notified as recently as yesterday the Israelis that we want to begin this work as soon as possible.

Typically, after I have negotiated with my counterpart, at that point it typically takes about 4 months of review and approval above my level with the Secretary of Defense and the interagencies, State Department and so forth. So that is the timeline I am looking at, sir, about 4 months after we have come to an agreement.

We believe we are very close. We have had a lot of preliminary discussion.

Mr. ROTHMAN. So that 4-month clock has not yet started?

General O'REILLY. It has not yet started. And, sir, it is not unprecedented. We just signed one about a month ago.

Mr. ROTHMAN. Right. And it won't start until two things happen: you come to an agreement on terms, and you know what this administration's predilections are with regards—

General O'REILLY. Well, I need approval, sir, up to the Secretary of Defense level.

Mr. ROTHMAN. Well, didn't they already approve the \$30 million?

General O'REILLY. Yes, sir, but what they are approving is the terms of the agreement. Not are we going to do it or not, it is the actual terms of the agreement that are in place.

Mr. ROTHMAN. So maybe I misunderstood you. I thought you saying that you were looking to the next budget to give you an indication of how this administration feels about the Arrow-3 and our missile system before you could engage completely in those negotiations.

General O'REILLY. Sir, our program agreements contain an entire funding line, and I don't have insight into what those out-years would be, so that we can come to an agreement of—and that is what we have always done with other programs.

Mr. ROTHMAN. So you are waiting for the budget, then.

General O'REILLY. Yes, sir.

Mr. ROTHMAN. But this is a 1-year budget, right?

General O'REILLY. There is also a POM—associate with it, a 5-year Program Objective Memorandum that goes with that.

Mr. ROTHMAN. And when is that POM due, General?

General O'REILLY. The actual delivery date of the POM, I would have to—

Mr. ROTHMAN. Approximately—

General O'REILLY. It is within the budget or—

Mr. ROTHMAN. Before June?

General O'REILLY [continuing]. Inside the Pentagon processes. But, yes, sir, it is typically done by this time. And, again, it is being delayed because of the budget delay.

Mr. ROTHMAN. So you should know what the 5-year plan is by June and hopefully finish your negotiations by then. And then 4 months after that, there should be an appropriation.

General O'REILLY. Sir, that is a typical timeline. Unless there is something unusual, that is what we have done.

Mr. ROTHMAN. Thank you, General.

Ms. KAPTUR [presiding]. I thank the gentleman.

Ms. Granger, do you have any questions at this point?

Ms. Granger yields at this point. You have no questions?

All right, then Ms. Kilpatrick.

Ms. KILPATRICK. I will pass.

Mr. KAPTUR. You will pass.

Mr. KINGSTON. I have one quick one.

Ms. KAPTUR. Yes, Mr. Kingston.

Mr. KINGSTON. Madam Chair, thank you.

General, a minute ago, Mr. Bishop and I were talking to you about communicating this, and you spoke of an unclassified article. I just wanted to let the committee know that there is a good takeaway here on things that we can talk about that are unclassified that would help educate our constituents on the importance of this—

Mr. BISHOP. And our colleagues.

Ms. KILPATRICK. And committee members.

Mr. KINGSTON. Absolutely. And it might be something that we, as a committee, might want to send out to the 435 Members and sign it on a bipartisan basis and say, "Just to remind you that this

is out there.” Because I am just very concerned about the education level, both internally and externally.

Ms. KILPATRICK. Which one was that?

Mr. KINGSTON. The General mentioned an article. He doesn’t have it with him, but he is going to get it to us.

General O’REILLY. Yes, ma’am. We have a booklet for this very reason, when I talk publicly, and to be able to address your point, sir. It is about 20 pages, and it describes the threat in an unclassified fashion to the greatest extent we can, and it has been approved by all of the Intel Community approvals needed. In fact, I use it at universities when I visit schools—Georgia Tech has it, Tuskegee has it. So it was produced in November. We can submit it for the record, sir, to the committee—

[The information follows:]

Unclassified and approved for public release copy of “MDA Foreign Ballistic Missile Capabilities”, dtd. April 2009 will be hand carried for submission.

Mr. DICKS [presiding]. We would like to have that.

General O’REILLY. And I can provide the electrons for that. But it does describe the threat very comprehensively, in an unclassified fashion, but it does make the points to a great extent what we have discussed here today.

Mr. BISHOP. Can you just give it to the members also?

Mr. DICKS. Yes, we have a lot of new members—

General O’REILLY. Yes, sir. We will make it available.

MISSILE TESTING STRATEGY AND TARGETS

Mr. DICKS. The Department has spent billions on anti-defense missile systems, and there have been questions about testing and delayed tests. You mentioned some of this in your opening statement. You also talked about the targets. You have had a problem with targets.

Why don’t you tell us generally what your strategy is on testing?

General O’REILLY. Sir, for testing, this system is obviously extremely complex, and to test the full system at any one time literally would take more than the national range assets that we have in our Nation. A test can stretch easily from Colorado to Alaska to the Marshall Islands off of Australia. And we have done a lot of testing up till now that is short-range. The type of capability that we have talked about this morning requires these long-range tests.

So I offered to the director of operational test and evaluation and each of the three services, their test organizations, to work collaboratively with them, starting last November, on reassessing the testing of the ballistic missile defense program, including short-range, long-range, and integrated, including our target needs and so forth.

We are aimed at doing two things: One, determining what information do we need to validate our models in simulation so we have confidence in them. Because, obviously, with these big tests, they cost as much as a quarter of a billion a test and about 40 minutes to execute. So that is a very expensive way to go.

So we want to be very careful and come to an agreement, which we have today, over what data we need. There are 95 variables

that we all agree with, including Dr. McQueary, the director of operational test and evaluation.

Today, we now that we know the data we need, we are determining what test scenarios need to execute. We are completing that work this month. Once we have determined that, the final stage is to determine what resources do we need in order to execute that test program.

My predecessors, in the approach over the last few years for the Missile Defense Agency, is to plan testing 2 years at a time. That leaves you at a disadvantage. With a very comprehensive test program like I just described, you really need to lay out 5, 6 years' worth of testing. So that is what I propose to do with Dr. McQueary at the end of May and lay out the plans and requirements.

In the area of targets, we spend a tremendous amount of time, money, and resources on targets, and we do have a lot of failure. This is part of the reason we do use actual targets—we use a lot of actual targets that we buy off the arms market that are the actual missiles that we are concerned about, and they sometimes have failures.

But there has been a disturbing rate of failures in the development of our newest class of targets. The production qualification of that target is 2 years late, and it is extensively overrun. It is an ICBM-class target, intermediate-range and ICBM class. It will fly for the first time this summer, and it will have a second flight in the fall.

At this point in time, I have made the decision that the development costs and the productivity of the contractor has had such concerns that I have gone to industry and asked them, what could you offer as an alternative? The period for that closes at the end of the week, then I will have that input. And we have finished the market survey, and this summer we will make a determination of whether or not we are going to compete this target program and give it to another contractor.

That is my position, my intent, at this time, sir, to look at a better way to acquire targets more effectively and also buy them in large quantities, which are much cheaper than the way we are doing now, where we are buying them one at a time.

MISSILE DEFENSE FORCE STRUCTURE REQUIREMENTS

Mr. BISHOP. Mr. Chairman.

Mr. DICKS. I am going to do one more question here, and then I will come to you, Mr. Bishop.

What effort has the Department undertaken to assess missile defense force structure requirements?

General O'REILLY. Sir, we have entered into a very effective program with the Strategic Command, STRATCOM, as the lead, representing all the co-coms and the three services, in order to determine a prioritized capabilities list, is the title of it. It is a list produced every 2 years, and it says this is their prioritized missile defense capabilities which they believe they need.

They submit it to a new board that was started last year that is chaired by the Under Secretary of Defense for Acquisition, but it has representation of all of the Under Secretaries of Defense and

the State Department, the co-com commanders, and the Joint Chiefs. In that process, they approve this prioritized capabilities list.

The Missile Defense Agency responds back to what we believe we can achieve from an affordability and from a technology point of view. They produce a final report to us, which is the basis of our budget submissions and our POMs. We have just received one about a month ago, and we are using that input in the budget deliberations today.

Mr. DICKS. Okay, good.

Mr. Bishop.

ACQUIRING THREAT TARGETS

Mr. BISHOP. ———.

General O'REILLY. Yes, sir. ———.

But some of our failures—if we buy a Scud, it is a very, very robust Scud; never had a failure on that. It is when they try to take these missiles and they try to extend the range of them or they do something to affect the design, they get into trouble sometimes.

Mr. BISHOP. Thank you.

Thank you, Mr. Chairman.

Mr. DICKS. One final thing. In this discussion we had previously about force structure, are the combatant commanders brought into this?

General O'REILLY. Yes, sir. They work—as a continual process, STRATCOM has the lead, but all the combatant commanders are represented.

Mr. DICKS. Okay, good. This committee will adjourn and reconvene at 2:00 p.m. today for an unclassified briefing on BlackBerry security issues.

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

EUROPEAN SITES AND THREATS

Question. Iran does not currently have the capability to reach the United States with a ballistic missile, although they continue to show interest in acquiring longer-range missiles. On the other hand, North Korea is developing a long-range missile (i.e., the Taepo-Dong II) that has the potential to reach the United States. Although North Korea's July 2006 flight test of the Taepo-Dong II failed, it is reasonable to believe that North Korea may plan tests in the future and could successfully test that missile.

What's the rationale for deploying our limited GBI interceptor inventory against a potential long-range threat (i.e., Iran) at the expense of the current and growing threat from North Korea?

Answer. A total of 30 GBIs will be emplaced at FGA and Vandenberg, where they will be in a position to defend the United States against both the North Korean and Iranian ICBM threats. Ft. Greely, Alaska, was selected as a location for the primary GMD missile field for its ability to protect the U.S. from ICBMs launched from North Korea and Iran due to the velocity and timelines for GBIs to intercept ICBMs from either launch point prior to their entering U.S. airspace.

Question. Do you believe you will have sufficient numbers of missile defense assets to defend our deployed forces and allies in the CENTCOM AOR against the current Iranian missile threat?

Answer. ———.

Question. Do we have the capability to support Aegis BMD operations in the CENTCOM AOR?

Answer. ———.

U.S. PROVIDING FOR THE DEFENSE OF EUROPE

Question. Based on the current plan, it seems that the U.S. taxpayers will be picking up the costs of defending Europe from ballistic missile threats.

Have you discussed this issue with the Europeans?

Answer. The U.S. has proposed to contribute to the defense of Europe and provide redundant coverage of the Eastern U.S. by providing most of the funding for the upper tier European Missile Defense. The U.S. would not benefit from redundant U.S. coverage without the contribution of land and Host Nation support of Poland, the Czech Republic and Denmark (allowing the use of the Upgraded Early Warning Radar (UEWR) at Thule, Greenland) as well as use and operation of the UEWR by the British Royal Air Force located at Fylingdales, UK. Finally, the U.S. has proposed only to contribute to the upper tier of Europe's defense. We are proposing other NATO nations contribute to the lower tier missile defense of Europe and our deployed forces in that theater.

Question. If so, what type of contribution are they likely to make?

Answer. The United Kingdom is contributing by hosting a U.S. Upgraded EWR (UEWR) at Fylingdales. Likewise, Denmark is contributing by hosting a UEWR (U.S. BMDS asset) in Thule, Greenland. NATO nations may elect to contribute lower tier missile defense systems to be integrated through the Active Layer Theater Ballistic Missile Defense (ALTBMD) program. Currently these systems are for the protection of deployed forces; however, at the Strasbourg/Kehl Summit in April 2009, Heads of State and Government tasked NATO to "identify and undertake the policy, military and technical work related to a possible expanded role of the ALTBMD program beyond the protection of deployed forces to include territorial missile defense".

Question. Are any European nations planning on procuring missile defense assets?

Answer. Some European nations (Germany, Netherlands, Greece) have or are procuring Patriot systems. France is procuring a lower tier missile defense system, SAMP-T and Italy and Germany are procuring MEADS. The Netherlands is investigating the feasibility of putting missile defense capability on their destroyers and have committed FMS funding for this effort. Other nations like Germany, Denmark, France, Italy, Spain, and the United Kingdom have invested in new air defense frigates/destroyers which may have the potential for being upgraded to an LRST capability in the future.

Question. What has NATO agreed to do with regard to missile defense in Europe?

Answer. The United Kingdom is contributing by hosting a U.S. Upgraded EWR (UEWR) at Fylingdales. Likewise, Denmark is contributing by hosting a UEWR (U.S. BMDS asset) in Thule, Greenland. NATO nations may elect to contribute lower tier missile defense systems to be integrated through the Active Layer Theater Ballistic Missile Defense (ALTBMD) program. Currently these systems are for the protection of deployed forces; however, at the Strasbourg/Kehl Summit in April 2009, Heads of State and Government tasked NATO to "identify and undertake the policy, military and technical work related to a possible expanded role of the ALTBMD program beyond the protection of deployed forces to include territorial missile defense".

Question. What infrastructure or other support for U.S. troops and our allies has been requested to be funded within the Services' budgets? When?

Answer. As the lead service for the European Interceptor Site, the Army developed requirements for garrison facilities in Poland. The Army budget for the European Interceptor Site will be \$35M/year of O&S. Service O&S funding will begin 3 years after construction starts.

The Air Force has lead service responsibility for the European Midcourse Radar Site. Air Force will be meeting with the U.S. Army Corps of Engineers (USACE) Europe District in June 2009 to discuss requirements for Air Force facilities in the Czech Republic. The Air Force budget for the European Midcourse Radar will be \$3M/year of O&S. Service O&S funding will begin 2 years after construction starts.

The mission facilities in the Missile Defense Agency (MDA) MILCON requests include the interceptor field, radar facility, power plants, communications facilities, and associated mission and mission support facilities and infrastructure. None of the MDA funding is programmed for service or garrison support infrastructure. However, the MDA has incorporated the Army and the Air Force in its requirements development, planning and design activities with the USACE to ensure that the Services are able to beneficially leverage and interface to the facilities and infrastructure that the MDA builds.

EUROPEAN SITE AND POLISH AND CZECH RELATIONS

Question. Originally there was strong public support in Poland and the Czech Republic for deploying U.S. missile defense capabilities in their respective territories. However, over the past several months, public support for the potential deployment has decreased.

What have been the key reasons contributing to the change in public opinion in Poland or the Czech Republic?

Answer. Public support for Missile Defense in the Czech Republic has traditionally been more tenuous than in Poland, where public support remains stronger. In both the Czech Republic and Poland, there are deeply held historical concerns about foreign troop presence on foreign soil which contributes to public concerns about the planned Missile Defense capabilities. However, as the recent fall of the Czech Republic government has shown, political trends in Prague are fluid and it is difficult to understand the trends of public support for Missile Defense.

Question. Have the different political parties in Poland or the Czech Republic had an influence over the negotiations?

Answer. During the negotiations on missile defense basing agreements and supplemental Status of Forces Agreements, both the Polish and Czech negotiating teams took the views of the major political parties into consideration in order to ensure the final documents would be acceptable to their parliaments.

Question. What impact will this have on the U.S. decision to move forward?

Answer. The FY09 Authorization and Appropriation law restricts the construction of the U.S. missile defense sites in Poland and the Czech Republic until their parliaments ratify their respective Ballistic Missile Defense Agreements and associated Status of Forces Agreements (SOFA). Thus the political support for the missile defense sites is critical to the deployment of the current missile defense proposal for Europe.

Question. What impact do the local entities have over the negotiations (i.e. mayors and local political leaders).

Answer. U.S. negotiating teams have dealt with or are dealing directly with the Czech and Polish federal governments. At the same time, U.S. officials and teams have met with, briefed, and taken questions from local officials in both potential host nations. Finalization of the Implementing Agreements in both countries will be influenced by the local governments.

Question. What effect does the Czech Parliamentary vote have on U.S. relations?

Answer. The U.S. and the Czech Republic will continue to enjoy good relations on a broad range of topics regardless of the outcome of the vote on U.S. BMD deployments.

USE OF THAAD AND AEGIS TO DEFEND EUROPE

One of the key rationales for deploying a GMD site in Europe is to protect our forward deployed radars in Europe. That said, if Iran decided to attack our European radars they would use medium and intermediate-range missiles, the type of missiles that THAAD and the SM-3 are designed to counter.

Question. Why can't we use THAAD and the SM-3 missile to protect Europe, especially the radars, from medium and intermediate range missile threats?

Answer. _____.

Question. The US is currently co-developing a system with Japan that would protect most European population centers from medium and intermediate range missile threats. Why do we need a duplicative missile defense system?

Answer. _____.

Question. What are the implications for the Navy's or the Army's force structure requirements if an SM-3 or THAAD alternative were to be pursued in Europe?

Answer. _____.

INCREMENTALLY FUNDING MDA PROGRAMS WITH R&D FUNDS

Question. MDA has approval to acquire assets with research and development (R&D) funds, which allows MDA to incrementally fund procurements. This is unlike any other program at DOD. The Department is conducting a review of the way the Agency does business.

Has it been determined whether incremental funding will result in a short term reduction in costs for MDA programs? Future years?

Answer. In the PB10 budget request, MDA is using Procurement funding for the THAAD batteries and SM-3 Block I interceptors in accordance with Sec. 233 of the FY08 National Defense Authorization Act and the Agency stopped the practice of incrementally funding procurement.

Question. How is this type of budgeting beneficial to the Department?

Answer. In the PB10 budget request, MDA is using Procurement funding for the THAAD batteries and SM-3 Block I interceptors in accordance with Sec. 233 of the FY08 National Defense Authorization Act and the Agency stopped the practice of incrementally funding procurement.

Question. Has MDA determined when the Agency's programs should transition from research and development to the operation and maintenance and procurement accounts?

Answer. In accordance with Section 233 of the FY08 National Defense Authorization Act, MDA has made the transition to Procurement funding and is now using Procurement appropriations for THAAD batteries and interceptors, AN/TPY-2 radars and Aegis SM-3 Block I interceptors. The transition to operation and maintenance accounts begins with the THAAD program in FY12.

GMD FLIGHT TEST DELAYS

Question. GMD has planned many flight tests in fiscal years 2009 and 2010. Many previous tests have been delayed or cancelled.

What happens that would drive a delay in the test program?

Answer. (1) BMDS complexity and capability development time. In order to maximize the contribution of every ground and flight test to the assessment of the BMDS at the system level, each test is highly integrated, tightly coupled, multi-element, and multi-Service. This complexity has increased the time it takes to develop both the systems under test (sensors, interceptors and fire control) and to integrate all elements and test capability into a realistic test provides data required to validate models and simulations and assess performance. Development delays of individual elements can affect the readiness to test and their integration with other elements.

(2) Test preparation time. Test case/scenario development is a process that includes the build up, integration and pre-mission testing of the specific capabilities to be tested. Test preparation time includes requirements management and test objectives flow down, test case/scenario development, integration of test configuration into the test ranges (lab and field) and analysis in preparation for test. Should element or component development software or hardware delay occur, this may result in re-work or test reconfiguration and may require additional analysis.

(3) Test target availability. It takes between 24 and 36 months to produce an operationally realistic target for GMD flight testing. Any problems encountered during build-up and test can equate to a test delay.

(4) Competition for shared test and operational assets. BMDS flight tests often use already fielded operational assets, and the shared use of operational assets as test assets can cause test schedule perturbations based on warfighter operational priorities. Range conflicts and real-world events can perturb the test schedule on a weekly basis, generating a nearly constant level of re-scheduling and deconfliction which adds to the complexity of MDA's test program management. Warfighter requests to meet emerging real world contingencies can impact asset availability to support tests. Recent requests required assets to model system behavior in response to potential rogue nation launches, as well as exercises to examine system behavior against potential near-term threats.

(5) National test range infrastructure capacity. There are multiple acquisition programs within and outside of the MDA competing to utilize the limited capacity of our national test range infrastructure. The major range and test facilities base activities, such as the Ronald Reagan Ballistic Missile Defense Test Site, the 30th Space Wing at Vandenberg Air Force Base, the Pacific Missile Range Facility, and numerous others, all use the same launch services, test instrumentation collection platforms, and test control centers. MDA must compete with other Air Force, Navy, DoD, NASA, and commercial space customers for dedicated range time. Scheduling of test resources and perturbations in any acquisition program using common range services can contribute to delays through the rescheduling across all programs.

(6) Ground-Based Interceptor (GBI) readiness for test. The GBI has incurred development and manufacturing quality issues resulting in delays in recent flight tests.

Question. Can you explain primary reasons behind the rescheduling of tests?

Answer. As discussed in the previous response, there are a number of factors that can contribute to rescheduling BMDS flight tests: (1) BMDS complexity and capability development time, (2) test preparation time including requirements management and test objectives flow down, test case/scenario development, integration of test configuration into the test ranges (lab and field) and analysis in preparation for test, (3) test target availability, (4) competition between shared operational and test assets, (5) available capacity across the national test range infrastructure given

multiple competing acquisition programs within and outside of the MDA, and (6) Ground-Based Interceptor (GBI) readiness for test.

Recent GMD flight test rescheduling is attributed to development and manufacturing quality issues with the GBI and test target availability.

Specifically, telemetry component problems in the GBI's Exoatmospheric Kill Vehicle (EKV), discovered prior to FTG-04, were due to manufacturing quality issues in a critical flight test component needed for flight testing. These issues delayed and subsequently led to FTG-04 being restructured as FTX-03. Because these manufacturing quality issues affected a critical non-tactical flight test component in all GBIs, the next planned test in the series, FTG-05, was delayed one quarter until a qualified replacement telemetry component became available. FTG-05 was conducted on December 5, 2008 and resulted in a successful intercept.

The FTX-03 and FTG-05 flight tests, with STARS/GROW targets, both experienced failures with the deployment of the target countermeasures. GMD's next flight test, FTG-06, previously scheduled for the second quarter of fiscal year 2009, was to use a Launch Vehicle-2 (LV-2), a new class of target, because the inventory of the STARS/GROW targets was exhausted. Test objectives for this engagement, with the required target scene including countermeasures, necessitated additional time needed to conduct detailed analyses causing the FTG-06 flight test to be rescheduled for the fourth quarter of fiscal year 2009.

Question. What issues remain to be resolved?

Answer. While unforeseen issues may arise, GMD initiated a 10-point Mission Assurance Improvement Plan (MAIP) in early May 2008 in response to interceptor supplier quality issues experienced on the GMD Program, primarily the quality issues discovered prior to FTG-04. The GMD Program identified the need to implement additional product acceptance control processes. The following points address key areas where the GMD program is instituting corrective actions or where it expects opportunities for improvement:

- (1) GMD now has a back-up GBI for every flight test.
- (2) GMD has conducted a quality stand down across the GMD program supply base. A second quality stand down was completed to share progress and provide feedback on inputs from suppliers, and supplier actions were taken on recommendations. Another GMD program quality stand-down is planned for May 2009 to provide status of actions and quality improvements.
- (3) The GMD program has instituted more comprehensive product and process change control, providing more robust review of impacts of supplier changes.
- (4) GMD has conducted detailed Mission Assurance Product & Process Reviews (MAPPRs) at critical suppliers currently in manufacturing. The GMD program is in the process of performing follow-on MAPPRs where required and will also conduct MAPPRs for other suppliers pending manufacturing restart at those suppliers.
- (5) GMD has reviewed and verified training and certification of the manufacturing workforce.
- (6) The GMD program has implemented Quality Product and Process Verification (QPPV) to enhance the standard supplier product acceptance process. QPPV adds additional criteria and requirements, as well as random process audits, to the hardware acceptance review process.
- (7) GMD has implemented a proactive Issue Identification Program which empowers over 3000 Prime Contractor employees, most subcontractors, and several critical suppliers to identify issues and halt work if quality or safety issues require immediate attention. The GMD Program Office and the Prime Contractor are also investigating and pursuing opportunities to incentivize supplier quality. The Prime contractor and subcontractors have also developed and provided employee awards for quality performance.
- (8) The GMD program is pursuing full MDA Assurance Provisions (MAP) and MDA Parts, Materials, and Processes Assurance Plan (PMAP) compliance through the development of Mission Assurance Implementation Plans (MAIPs) and PMAP Implementation Plans for all critical suppliers under the GMD Core Completion Contract (CCC).
- (9) GMD is implementing a hardware/software pedigree review process as part of Ship Readiness Review and Hardware Acceptance Reviews. Pedigree reviews have been completed for FTG-05, operationally configured GBIs, and is in progress for FTG-06.
- (10) The GMD program conducted hardware pedigree inspections of "In Stock" product at suppliers where product is currently out of production.
- (11) GMD is conducting a baseline review across the interceptor supply chain of product acceptance and screening. The GMD Prime Contractor and Aerospace Corporation are currently reviewing the initial engineering assessment results prior to submission to the Government for review.

Question. How will this impact the current test plan for GMD?

Answer. The GMD test plan is under review as part of the ongoing BMDS comprehensive test program review. Since early 2009, MDA has been working on a systematic review of BMDS test planning in partnership with the Army, Navy, and Air Force Operational Test Agencies (OTA), with the support of the Director for Operational Test and Evaluation and the warfighter community. This review is intended to revitalize the missile defense test program and make it more affordable. Using criteria supplied by the OTA, the warfighter, and MDA's system engineers, we are undertaking a comprehensive test review to ensure our ground and flight testing is designed to provide data that MDA and the operational test community use to anchor models and simulations and verify system functionality and operational effectiveness. Unlike MDA's previous convention of limiting test planning to a two-year period, the results of this review will be an event-oriented plan that extends until the collection of all identified data is complete.

The BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing to validate their accuracy, since physically testing all combinations of BMDS configurations, engagement conditions, and target phenomena is economically prohibitive. We are changing from an architecture-based approach to a parameters-based approach. The focus of the on-going BMDS test review is to determine how to validate our models and simulations so that our warfighting commanders have confidence in the predicted performance of the BMDS, especially when those commanders consider employing the BMDS in ways other than originally planned or against threats unknown at this time. Despite this desire to rely on models, the complex phenomena associated with missile launches and associated environments mandates that some performance measurements can only be investigated through flight and ground testing of the operational BMDS.

The ongoing BMDS comprehensive test program review is being conducted in three phases. In Phase One, MDA and the Army, Navy, and Air Force Operational Test Agencies studied the models and simulations and determined the data needed to accredit them using a comprehensive verification, validation, and accreditation process. Despite our desire to rely on models, they cannot provide all operational performance measurements required to assess the system. Much of the data needed to understand system survivability, reliability, performance in extreme natural environments, and supportability can only be measured through ground and flight tests.

In Phase Two, test objectives and scenarios for a campaign of flight and ground tests are under development. Test personnel are prioritizing test designs based on requirements to determine the system's capabilities and limitations and the need of the Combatant Commanders to field a specific block of missile defense capability. Data from these tests are fed back into the models and simulations in order to make them credibly reflect system performance. These tests will not only address data necessary to validate the models of individual missile defense interceptor systems but will also demonstrate the performance of the BMDS working as an integrated system.

During Phase Three of the review, to be completed by the end of June 2009, the funding and infrastructure needed to implement the test campaigns will be addressed. A key cost driver will be the ability to establish an inventory of reliable targets to satisfy test requirements over a variety of flight test regimes.

At the end of this test review, we intend to report to Congress on needed changes in our test plans and implications for future funding needs.

Question. How will the test plan review change the way MDA tests?

Answer. MDA is changing from an architecture-based approach to a models and simulation Verification, Validation, and Accreditation parameters-based test approach. The new BMDS performance evaluation strategy is to develop models and simulations of the BMDS and compare their predictions to empirical data collected through comprehensive flight and ground testing. Once accurate, the models and simulations can predict system performance over a vast set of operating conditions. The current architecture-based approach physically tests all combinations of BMDS configurations, engagement conditions, and target phenomena. This became awkward and slow as the BMDS matured, as well as demanded unique and costly target development.

The new test strategy is designed to validate the models and simulations so that the war fighting commanders have confidence in the predicted performance of the BMDS, especially when those commanders consider employing the BMDS in ways other than originally planned or against threats unknown at this time.

Moreover, unlike the MDA's previous convention of limiting test planning to a two-year period, the results of this three-phase test plan review will be an event-oriented plan that extends until the collection of all identified data is completed. Ad-

ditionally, MDA is engaging with war fighters to ensure MDA is testing the BMDS using operational doctrine and real-world constraints, so that, as much as possible, MDA is testing the system in a manner similar to how the war fighters will employ it in combat.

TEST REVIEW

Question. The Department has spent billions on an anti-missile defense system without adequate testing due to failed and delayed tests. The Services often complain that MDA does not test how the Services test. As the Administration is reviewing MDA for its future budgets: How is the Agency rectifying these issues?

Answer. First, simplify and refocus the test strategy. MDA is focused on conducting meaningful ballistic missile testing that rigorously demonstrates the capabilities of the BMDS. Our three-phase test strategy, with full involvement by DOT&E and the multi-Service Operational Test Agency (OTA) Team, will produce an Integrated Master Test Plan that is event-oriented and extends until the collection of all identified data is completed. MDA is engaging with war fighters to ensure that MDA is testing the BMDS using operational doctrine and real-world constraints, so that, as much as possible, MDA is testing the system in a manner similar to how the war fighters will employ it in combat.

Unlike Service testing, MDA is inherently joint and tests to provide an integrated war fighting product on delivery. MDA is working in partnership with the multi-Service Operational Test Agency (OTA) Team and the war fighter community to revitalize the missile defense test program and make it more robust and affordable. Using criteria supplied by the OTA, the war fighter, and MDA's system engineers, ground and flight tests are designed to provide data that MDA and the operational test community use to anchor models and simulations and verify system functionality and operational effectiveness. To provide better oversight, the Test and Evaluation Standing Committee of the Missile Defense Executive Board was established and meets regularly to oversee the test and evaluation (T&E) planning and resource roadmap as it relates to MDA test requirements and test program, and to provide technical recommendations and oversight for the conduct of an integrated T&E program and investment strategy.

Like Service testing, the new test program will have several Operational Tests (OT) to verify doctrine, tactics and procedures that will be operated by the OT and warfighting communities of the services.

Question. How are you reorganizing the current test plan to ensure adequate test are completed?

Answer. The focus of the on-going BMDS three-phase test review has been to determine how to validate our models and simulations so that our war fighting commanders have confidence in the predicted performance of the BMDS.

In Phase 1, MDA and the multi-Service Operational Test Agency (OTA) Team studied the BMDS models and simulations and determined the variables (key factors) most sensitive to the predicted results. MDA then combined sets of key factors with test conditions that provide the greatest insight into the BMDS models' predictive capability, when compared to test results, and called them Critical Engagement Conditions (CECs). There are many cases where the only practical way to measure performance is by ground or flight testing under operationally realistic conditions. MDA calls these tests Empirical Measurement Events (EMEs). Much of the data needed for the OTA Critical Operational Issues (COIs), such as survivability, reliability, performance in extreme natural environments, and supportability, can only be collected through the conduct of EMEs.

In Phase 2, MDA combined CECs, EMEs, and COIs into test objectives and developing scenarios to accomplish those objectives over a campaign of flight and ground tests. These test objectives would not only address data necessary to validate the models of individual missile defense interceptor systems, but would also demonstrate the performance of the BMDS working as an integrated system. MDA will prioritize the resulting test scenarios according to the need to determine BMDS capabilities and limitations and the Combatant Commanders' urgency of need for a specific missile defense capability.

In Phase 3, MDA will determine the funding and infrastructure necessary to implement the test campaigns identified in the second phase. A key cost driver will be the ability to establish an inventory of reliable target configurations that will satisfy the CECs, EMEs, and COIs over a variety of BMDS flight tests.

At the conclusion of the three-phase test plan review, MDA will produce, with full involvement by DOT&E and the multi-Service Operational Test Agency (OTA) Team, an Integrated Master Test Plan that is event-oriented and extends until the collection of all identified data is completed to ensure adequate test investments.

MULTIPLE KILL VEHICLES

Question. MDA is developing the Multiple Kill Vehicle (MKV) to allow a single interceptor to engage a number of credible objects that an enemy missile might deploy. The Agency expects to deploy an operational capability in the 2017 timeframe. In January 2004, MDA awarded a contract to Lockheed Martin to develop a carrier vehicle that directs multiple kill vehicles with planned deliveries in 2014. This concept, if successful, would benefit GMD and KEI. MDA also proposed in the FY08 budget to have Raytheon develop an alternate concept in which a lead kill vehicle would direct other kill vehicles. This concept, if successful, would primarily benefit SM-3. In the third quarter of fiscal year 2010, MDA will determine whether a carrier vehicle with multiple kill vehicles is feasible or whether the program will move forward with a unitary carrier vehicle.

If MDA finds that multiple kill vehicles are not feasible, how will this impact the GMD?

Answer. In his April 6, 2009 briefing to the press on Fiscal Year 2010 budget recommendations, the Secretary of Defense announced that “. . . we will terminate the Multiple Kill Vehicle Program because of its significant technical challenges and the need to task a fresh look at the requirement.”

Question. How will the Aegis BMD programs and the kill vehicle planned by the KEI program be affected since you plan to stop all work on unitary kill vehicle work this year?

Answer. We do not plan to stop work on unitary kill vehicles this year. The MDA intends to continue development of a unitary kill vehicle for integration in the SM-3 BLK IIA as agreed to with Japan. MDA programmatic leadership of the development effort is being reviewed during MDA PB10 discussions.

KINETIC ENERGY INTERCEPTOR (KEI) COMPARED TO AIRBORNE LASER (ABL) FOR BOOST PHASE DEFENSE

Question. MDA awarded a contract in December 2003, which was to continue through January 2012, to develop and test the Kinetic Energy Interceptor (KEI). At that time, MDA stated that KEI was being designed as a mobile capability to destroy intermediate and long-range ballistic missiles during the boost/ascent phase of their flight. In 2005, MDA selected the Airborne Laser (ABL) as its primary boost phase capability, but continued development of KEI. Most recently an independent assessment was done that recommended a second booster in order to test two boosters simultaneously.

Have there been any studies that conclude KEI is the better choice for a boost phase capability? If so, why has MDA chosen to continue to pursue ABL as its primary boost phase capability?

Answer. The MDA submitted a Boost Phase Intercept study Report to Congress in April 2006 that described in detail the different boost phase capabilities and limitations of the ABL and KEI. There was no finding in this report that KEI was a better choice than ABL as a boost phase capability. The development of this Congressional report included significant interaction with PA&E and a detailed review of their independent study results. MDA openly shared our technical and programmatic data with the PA&E team, and we conducted several technical interchanges with them to review and discuss findings. These discussions with PA&E led to modifications of the MDA Report to Congress.

The PB10 Budget Request cancels the Kinetic Energy Interceptor program because of incompatibility of the KEI concept with the Secretary of Defense's guidance to develop missile defenses against rogue nation threats and theater missile threats and concerns with performance, technical challenges and affordability. The KEI mission grew from a boost phase interceptor to a boost and midcourse phase interceptor. The schedule grew from a 5½-year to a 12- to 14-year development program (depending on currently identified spirals). Program cost grew from \$4.6B to \$8.9B and missile unit cost grew from \$25M to over \$50M per interceptor. Technical issues delayed the first booster flight test date, established in 2007, by over a year (it is not on track to be conducted in FY09). Affordability issues and government changing of requirements, not contractor performance, was the main contributor to KEI's execution problems.

Question. Has KEI been redefined as a midcourse capability instead of a boost/ascent phase capability?

Answer. KEI was both a boost and midcourse phase capability. The PB10 Budget Request cancels the Kinetic Energy Interceptor program because of incompatibility of the KEI concept with the Secretary of Defense's guidance to develop missile defenses against rogue nation threats and theater missile threats and concerns with performance, technical challenges and affordability.

Question. Will the contract incur increased termination costs should MDA decide to terminate KEI's contract in 2009 or is contract termination not a possibility even if ABL remains the primary boost phase capability?

Answer. The contract will not incur increased termination costs if it is terminated in FY09. The PB10 Budget Request cancels the Kinetic Energy Interceptor program because of incompatibility of the KEI concept with the Secretary of Defense's guidance to develop missile defenses against rogue nation threats and theater missile threats and concerns with performance, technical challenges and affordability.

Question. In 2008, the KEI program flight tested the interceptor's boosters, a critical technology, to determine if they will function as intended. In 2009, MDA will use the results of the booster test and the results of ABL's lethality demonstration to decide the future of the KEI and ABL programs. However, in 2005 MDA directed the KEI program to incorporate the capability to engage missiles during the mid-course phase of flight and KEI's contract is being extended until September 2015. MDA's Director previously has said that the mission of KEI has not been redefined. KEI is still an alternative for ABL should ABL fail in its lethality demonstration.

Does the funding provided in FY2009 fulfill the objectives that reflect either the advancement or evolution of the KEI program?

Answer. The booster development funded in FY09 has not fulfilled the objectives of either the boost or midcourse missions. The PB10 Budget Request cancels the Kinetic Energy Interceptor program because of incompatibility of the KEI concept with the Secretary of Defense's guidance to develop missile defenses against rogue nation threats and theater missile threats and concerns with performance, technical challenges and affordability. Additionally, MDA is pursuing other more near-term ascent phase intercept capabilities.

ABL LETHALITY AGAINST POTENTIAL THREATS

Question. Even if ABL is successful in its lethality demonstration in 2009, there are still many questions about how it would be employed.

What is ABL's capability against potential threats from China and Iran with respect to ICBMs? What about other nations?

Answer. _____.

Question. What about potential over flight of a hostile nation?

Answer. ABL has considerable stand-off distance against MRBM, IRBM and ICBM threats allowing it to engage threats outside the range of most rogue nation adversary threats. Current ABL CONOPS dictate over flight can occur after achieving air superiority. The USAF would not achieve air superiority until after hostilities have started and the timeline would be dependent on the capabilities of the adversary. In addition, the ABL will be protected identical to other high value assets (i.e. JSTARS & AWACS) with a fighter combat air patrol.

Question. Are there other programs currently in development at MDA that are possible better options for boost phase defense?

Answer. MDA is assessing more near-term, cost-effective options for early intercepts. We are adding an ascent phase layer that will leverage existing and planned Aegis Standard Missile-3 (SM-3) capabilities and use them in new ways to enable earlier opportunities for missile intercepts. Ascent phase intercepts extend engagement windows so that the warfighter can shoot one interceptor, evaluate the consequence, and shoot again if necessary, avoiding wasteful interceptor salvos. This increases the battlespace to not just the midcourse phase, but moves it forward into the ascent phase. These earlier intercepts are enabled by using existing sensors such as the Overhead Persistent Infrared (OPIR) sensors, forward-based radars or Unmanned Aerial Vehicle (UAV)-based sensors. When integrated with existing mid-course and terminal systems, the resulting multi-tiered Ballistic Missile Defense System (BMDS) is better suited to counter complex threats cost effectively.

We do not plan to completely cease our investments in boost phase. Our plan is to refocus our efforts to additionally develop and rapidly field lower risk ascent phase capabilities as they are demonstrated. We will continue researching concepts such as Airborne Laser (ABL) (including the demonstration of lighter weight, higher efficiency lasers that can enable more cost effective directed energy intercept concepts). These concepts will remain in the technology development phase until sufficient knowledge has been gained on technology readiness, operational viability, and contribution to the Ballistic Missile Defense System (BMDS) to warrant a higher level of investment.

Question. Are there other missions for ABL?

Answer. Yes, analyses have explored the potential utility of the ABL in several other classified missile defense missions.

AIRBORNE LASER (ABL) COSTS FOR FULL DEPLOYMENT

Question. After a schedule delay, the Airborne Laser is now expected to demonstrate a lethal shoot down in 2009. Based on the demonstration, intends to make a decision on development of a second ABL aircraft.

What requirements determine the number of ABL aircraft needed?

Answer. The number of ABL aircraft needed to defend against a named area of interest is highly dependent on the nature of the threat. Initial estimates for maintaining two simultaneous 24/7 Combat Air Patrols require a fleet of 5 ABLs, with a total fleet size of 7 aircraft. Three ABLs should be able to provide a single, 24/7 Combat Air Patrol in a boost phase mission. Less Aircraft are required for other classified missile defense missions.

Question. What type of aircraft will be used for the second ABL?

Answer. Planning for Tail 2 has been cancelled in the FY10 PB submittal.

Question. For 24/7 coverage, how many orbits of ABL aircraft are required, and how many ABL's per orbit are required?

Answer. Depending on the distance to the Forward Operating Base and availability of tanker support, a single 24/7 Combat Air Patrol would require three ABL's. Less aircraft are required in other classified missile defense missions.

Question. What is the basing concept for ABL? What is the plan for delivering the chemicals required for the laser into a forward-based location?

Answer. The Joint Staff and the Combatant Commanders continually review and update ballistic missile threats and capability gaps. This information is, in turn, used by The Office of the Secretary of Defense to assess future development and employment options. MDA will support their decision making process with technical studies and performance analysis of current U.S. BMD assets including the potential basing of a second forward-deployed X-Band radar to Japan.

Question. Do you have an independent cost estimate for an operational ABL? What about the cost of forward basing?

Answer. No. Due to the maturity of the ABL program compared to other BMDS elements, MDA has decided to delay an OSD CAIG cost estimate of operational ABL costs and forward basing costs until ABL is part of the MDA block program.

Question. Can the taxpayer afford to buy the number of ABL's required?

Answer. The second aircraft for the ABL program was canceled in the PB 10 Budget Request. MDA will continue to conduct testing with the prototype ABL aircraft, and has taken steps to ensure critical industrial infrastructure is protected. Decisions on the future of the program, including affordability, will depend on successful completion of key knowledge points, including the lethal shutdown of a target during a flight test scheduled for the end of FY09.

U.S./JAPAN MISSILE DEFENSE COOPERATION

Question. Over the past several years, the U.S. and Japan have conducted robust cooperation in the missile defense area including the deployment of a X-band radar in Japan and joint 50/50 cost-share development of the Standard Missile-3 Block IIA missile.

Could you provide an update on the status of our cooperation with Japan on missile defense programs?

Answer. BMD cooperation with Japan is a success story in the U.S.-Japan Alliance and has resulted in the Japanese fielding both sea and land based missile defense systems. U.S.-Japan bi-lateral cooperation plays an important role in supporting our common strategic interest in defense and enhances Japan's ability to defend itself. Our largest missile defense program with Japan is the SM-3 Block IIA Cooperative Development (SCD) Project. This year, we will sign Amendment 1 to the SCD Annex, defining costs and workshare for this program. We anticipate initiation of negotiations this summer for Amendment 2 of this program, which will finalize workshare including workshare for at sea test firing operations of SM-3 Block IIA. We are also pursuing a follow-on joint analysis with Japan to collaboratively review future missile defense requirements. We expect to develop and negotiate an agreement to proceed with the analysis this year. Finally, we are working with the Japanese on interoperability and information sharing. To that end, we are discussing requirements to facilitate eventual interoperability between their Japan Aerospace Defense Ground Environment (JADGE) command and control system with the U.S. BMDS. The AN/TPY-2 U.S. X-Band radar was deployed to Japan's Shariki Air Self Defense Force Base in northern Japan in 2006. Data is currently being shared with Japanese forces.

Question. Are you considering moving the second Forward-Deployed X-Band Radar to Japan?

Answer. The Joint Staff and the Combatant Commanders continually review and update ballistic missile threats and capability gaps. This information is, in turn, used by The Office of the Secretary of Defense to assess future development and employment options. MDA will support their decision making process with technical studies and performance analysis of current U.S. BMD assets including the potential basing of a second forward-deployed X-Band radar to Japan.

Question. MDA recently decided to incorporate a modular kill vehicle into the Block IIA even though Japan has only agreed to use a unitary warhead. Can you discuss how this could impact our cooperation with Japan?

Answer. The U.S.-Japan SM-3 Block IIA Cooperative Development (SCD) Project calls for incorporation of a unitary kill vehicle only. The FY10 President's Budget terminates the MKV program.

TESTING INFRASTRUCTURE

Question. The Committee has been told that one of the key elements limiting the current missile defense test program is the lack of infrastructure.

What specific actions can be taken to improve MDA's testing infrastructure?

Answer. As we complete the development of the Integrated Master Test Plan (IMTP) we are working key enablers to support more robust testing. The enablers fall into the two categories of supporting ground or flight test.

In the ground test category we have identified the need for a second Hardware-in-the-Loop (HWIL) facility that allows us to simultaneously exercise the fielded BMDS with operations in the loop while we are simultaneously testing the next system upgrades with our government/industry development team. This second facility will leverage the Integrated System Test Capability (ISTC) laboratories already in place under our GMD program and expand to include other element representations. The following infrastructure will be required to support this concept:

- Aegis Ballistic Missile Defense representations
- Command, Control, Battle Management & Communications (C2BMC) suite dedicated to Ballistic Missile Defense System (BMDS) Integration/Development Testing
 - Additional Upgraded Early Warning Radar processes (adds Thule to BMDS)
 - Radar Data Signal Injection System for two TPY-2 and SBX and EMR radars
 - Equipment to link Cobra Dane radar directly into the ground test architecture
 - Integration of digital models of Patriot for integration tests
 - Integration of Patriot Drive Up System Test Facilities for distributed tests
 - TBD Additional HWIL or digital representations of Terminal High Altitude Area Defense (THAAD)

In addition, a number of infrastructure enhancements are required to increase the capacity and/or the fidelity of the current element representations, which will improve the quality & quantity of the testing:

- To better test "end game" capabilities 7V/10V Arnold Engineering space chamber upgrades are necessary for advanced scene projectors
- Improvement to service test range communications and operational communications emulations
- Dedicated test control infrastructure to support testing with international partners
- Portable equipment to support increased data handling requirements when we test in Europe or Japan
- VAFB Salvo Launch capability under Flight test

In the flight test area we will expand our test operating area by adding more integrated system flight tests to the Reagan Test Site (RTS) to allow more complex, operationally realistic testing and explore East Coast range options. Our vision includes developing a regional/theater range architecture that leverages existing capability at RTS and target launch capability at Wake Island leveraging MDA's mobile test infrastructure. To support this vision we will need more reliable communications at RTS (which is in work) and Wake Island. Additional investments are listed below:

- Sea-mobile ship-based telemetry and range safety capability to support off-range testing
- Spare tracking sensor system for the common primary sensors on the airborne HALO-II and WASP airborne sensor platforms
- Need to add an East Coast range item (either feasibility study or Wallops Island expansion for MDA)

Question. What are the costs associated with those steps?

Answer.

- Aegis Ballistic Missile Defense representations (\$0.6M)
- Command, Control, Battle Management & Communications (C2BMC) suite dedicated to Ballistic Missile Defense System (BMDS) Integration/Development Testing (\$6.5M)
- Additional Upgraded Early Warning Radar processes (adds Thule to BMDS) (\$1 M)
- Radar Data Signal Injection System for two TPY-2 and SBX and EMR radars (\$4.8M)
- Equipment to link Cobra Dane radar directly into the ground test architecture (\$2M)
- Integration of digital models of Patriot for integration tests (\$1.6M)
- Integration of Patriot Drive Up System Test Facilities for distributed tests (\$1.4M each, max 3)
- TBD Additional HWIL or digital representations of Terminal High Altitude Area Defense (THAAD) (\$TBD M)
 - To better test “end game” capabilities 7V/10V Arnold Engineering space chamber upgrades are necessary for advanced scene projectors (\$4M)
 - Improvement to service test range communications and operational communications emulations (\$2M)
 - Dedicated test control infrastructure to support testing with international partners (\$4.6M)
 - Portable equipment to support increased data handling requirements when we test in Europe or Japan (\$1M)
 - VAFB Salvo Launch capability under Flight test (\$5M)
 - Sea-mobile ship-based telemetry and range safety capability to support off-range testing (\$15M)
 - Spare tracking sensor system for the common primary sensors on the airborne HALO-II and WASP airborne sensor platforms (\$5M)
 - Need to add an East Coast range item (either feasibility study or Wallops Island expansion for MDA) (\$TBD M)

TESTING AND LACK OF SUFFICIENT NUMBER OF TARGETS

Question. One of the key limiting factors of MDA’s test program has been the lack of sufficient number of missile defense targets and the inventory of foreign assets.

Do you currently have a sufficient amount of targets to execute your testing program?

Answer. All of our FY09 planned target missions are under contract and all but one of the target FY10 missions (FTG-08) are on contract. Barring unforeseen increases to the number of tests, target failures or requirements that mandate mission tailoring, we have sufficient targets to execute the current test program. The FTG-08 targets mission is in negotiation under the existing Lockheed Martin Prime Contract and is expected to be definitized by end of 4th Qtr FY09. Because our increased investment in backup targets was only started to a very limited extent in FY09, we do not have backup targets for all FY10 and FY11 missions. We will be re-evaluating our allocations of targets, to include backup targets, to flight tests as part of the Agency’s on-going three phase test program review and the development of the Integrated Master Test Plan.

Question. If not, what can we do to improve the number of targets?

Answer. We have sufficient targets to support the PB09 program but the Targets and Countermeasures Program has limited flexibility to meet short-term, emergent, or contingency planning requirements. Improving opportunities for contingency planning and backup targets was addressed in the FY09 Congressional add of \$32M that provided for the procurement of the LV-2 and an E-LRALT spare. Additionally, we are currently evaluating industry responses to our recent request for information to complete a business case analysis and consider an alternative acquisition strategy for targets due to the significant quality problems and high costs of our current targets program.

Question. Would additional funds in this area be helpful?

Answer. Yes, additional funding and maintaining a backup inventory of target hardware components would minimize target cycle time and mitigate risk of critical path schedules. As part of the future acquisition strategy development activities the Agency is developing a Business Case Analysis (BCA) of multiple acquisition Courses of Action against the responses to the January 2009 Request for Information. This BCA will include the impacts to the Targets and Countermeasures program resulting from the Integrated Master Test Plan (IMTP) replan and the Agency’s Modeling and Simulation verification activities. The BCA results may indicate

an opportunity to procure fewer target configurations in larger quantities, reducing costs, cycle times and improving opportunities for reliability enhancements.

The Agency received a Congressional add of \$32M to support the procurement of backup/spare targets in FY09, which was utilized to acquire an LV-2 and an E-LRALT spare. With completion of the BCA, an optimized procurement strategy may require additional funding in the near term to reduce unit costs, establish competitive base, and deliver sufficient backup targets to support the revised IMTP through increased quantity procurement. A final determination cannot be made until BCA, IMTP, and resulting acquisition strategy development in early 4th qtr FY09.

Question. Would having a procurement account be beneficial?

Answer. No. A procurement account does not offer the flexibility required to support providing numerous targets configurations in a dynamic environment for the BMDs flight test program. The RDT&E appropriation allows the Targets and Countermeasures Program Office the degree of flexibility necessary in the testing of the Ballistic Missile Defense System.

MISSILE DEFENSE CAPABILITIES AND TRANSITION TO THE WARFIGHTER

Question. Ballistic missiles and technology continue to proliferate throughout the world. Some nations are using their developing ballistic missile capabilities to threaten their neighbors. Deployed U.S. forces have a missile defense capability with PATRIOT and fielding the of Standard Missile-3 as the intercept or on the Aegis system. Additionally, the Terminal High Altitude Area Defense (THAAD) has successfully returned to flight testing and should soon be a deployed missile defense asset.

Looking to the future, how are you working to transition these missile defense capabilities to the warfighters and to determine the appropriate asset mix of PATRIOTS, Standard Missile-3s, and THAAD interceptors.

Answer. Transition: The Patriot Program was transferred to the Army in 2003 by direction of the Patriot Advanced Capability-3 Transfer and Medium Extended Air Defense Systems (MEADS) Realignment Plan.

In 2006, MDA, DOT&E, and the Navy agreed on the plan for transitioning Aegis BMD "Block 04" capability. In 2007, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD AT&L) approved the Block 04 capability for entry into the transition phase. Operations and Sustainment (O&S) responsibilities for the 18 Aegis BMD ships and up to 90 Standard Missile 3 (SM-3) Block 1A missiles were transitioned to the Navy in FY08.

The BMD 3.6/SM-3 Block 1A system was transferred to the Navy in October 2008 after the Navy's operational test director recommended transfer, having found the system to be operationally suitable and effective. Future Standard Missile variants planned for transfer to the Navy will be addressed separately as they become technologically mature.

The U.S. Army and MDA signed a Memorandum of Agreement (MOA) on January 23, 2009 for the transition of THAAD, AN/TPY-2 radar, and Ground Based Interceptors and Ground Systems to the Army. MDA and the Army are currently developing the THAAD annex to the MOA which will define the event based criteria for the transition of operations, support and physical accountability of THAAD firing units to the Army. In addition the THAAD annex, will document the roles, responsibilities, resources, and schedules as agreed to by MDA and the U.S. Army, is expected to be completed by the end of 4th quarter, FY09.

Asset mix: The Army and Combatant Commanders work together to determine the required number of lower-tier PATRIOT interceptors.

The Joint Capability Mix Study II (JCM II), sponsored by U.S. Strategic Command's (USSTRATCOM) Joint Functional Component Commander-Integrated Missile Defense and the Joint Staff, Force Structure, Resources and Assessment Directorate, J-8, and endorsed by the Joint Requirements Oversight Council (JROC) in March 2008, determined the appropriate mix for the upper-tier THAAD and SM-3 interceptors. The JCM II recommended the acquisition of additional THAAD and SM-3 interceptors to achieve the appropriate mix. The Missile Defense Executive Board and the Deputy's Advisory Working Group approved resources for the acquisition. The Department is programming these procurement quantities thru FY 2015.

In addition to questions of inventory, MDA addresses warfighter-desired capabilities through the Warfighter Involvement Process (WIP). The Combatant Commanders, coordinated by USSTRATCOM, document their desired capabilities in the Prioritized Capabilities List (PCL). MDA reviews each PCL entry in terms of affordability, technical difficulty, performance versus threat, and schedule, and informs the warfighter of its findings via the Achievable Capabilities List (ACL). USSTRATCOM presents its assessment of MDA's response via the Capabilities As-

essment Report (CAR). This process to prioritize MDA's development efforts is overseen by the Missile Defense Executive Board (chaired by USD (AT&L) and provides key inputs to MDA POM and acquisition strategy.

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

WEDNESDAY, MAY 20, 2009.

**FISCAL YEAR 2010 DEPARTMENT OF DEFENSE BUDGET
OVERVIEW HEARING**

WITNESSES

HON. ROBERT GATES, SECRETARY OF DEFENSE

**ADMIRAL MICHAEL MULLEN, USN, CHAIRMAN, JOINT CHIEFS OF
STAFF**

**HON. ROBERT HALE, UNDER SECRETARY OF DEFENSE, (COMP-
TROLLER)**

OPENING REMARKS OF MR. MURTHA

Mr. MURTHA. The committee will come to order.

We will hold an open hearing on Fiscal Year 2010 Department of Defense budget request.

As the members of the committee are aware, they have held a very robust hearing schedule, this is the 32nd of 35 hearings this year, and it includes Defense Subcommittee hearings as well as those of the Select Intelligence Oversight Committee.

I would also note this is a historic day, the first time that this room has been used for a hearing.

So, Mr. Secretary, Chairman, you are the first to use this room. We are pleased to welcome all three of you to the committee. We intend to work with you on your very vigorous schedule that you have set up.

Stop-loss is a very interesting thing, stop-loss. Had to fight with the Army. They didn't want it. They argued with me. You stepped in, and we got stop-loss started, and we intend to continue stop-loss. We got a glowing letter from the White House, saying they supported what we are trying to do.

This committee feels very strongly that if a person was extended—and the first thing you said when you became Secretary and you came before the committee, you said you wanted to stop stop-loss. Well, you weren't able to stop it, but at least we are going to be able to give money to the people who were extended in what I consider a draft.

Outsourcing, the committee understands outsourced positions cost \$44,000 more than comparable civilian positions. Last year we put \$5 billion in the budget to cut contracting out. We put \$1 billion for direct hiring. We know you are moving in that direction, and we appreciate what is happening.

Acquisition reform is going to be much more difficult. The Congress itself cut a lot of money out of the numbers of people in acquisition. We know that has hurt, and we know it is a real problem for you; and we want to work with you, trying to get as much as we can and get it up to speed as quick as we can.

Now, I met just yesterday with a contractor who was handling tires. This is Michelin hiring all of—they decide who gets the tire contracts. It looked very fair; I can't argue with the way they were doing it. But it costs us a lot more than we hoped, and next time you will be able to do this in-house. You won't have to go to a contractor in order to do that.

Since last year we have had significant change in the national security focus in the United States, and we have a new President, and we look forward to working with the administration on Iraq and Afghanistan and the rest of the world.

So we appreciate your coming before the committee, Mr. Gates, chief and the controller, and turn to Mr. Young for any comments he may have.

REMARKS OF MR. YOUNG

Mr. YOUNG. Mr. Chairman, thank you very much. I want to add my welcome to Secretary Gates, Admiral Mullen and Secretary Hale.

We appreciate your being here today, realizing you have an awful lot of work to do. But I think meeting with this committee is a very important part of your work, because as you know by now, you have no better friends on Capitol Hill than the members of this committee on both sides of the aisle.

We remain committed to ensuring that our military men and women have the equipment they need, funding and support for training, and whatever is needed to carry out their mission and to do so safely.

Mr. Secretary, you and your staff have described this budget as a reform budget. And as we look at some of the major decisions, it is easy to see why. The termination of many troubled programs, such as the Presidential helicopter, major parts of the Army's future combat system and the advanced communications satellite, TSAT, just to name a few, shows that you are dedicated and committed to reform.

However, with only 2 percent real growth, even less if you consider the shift of funds from the supplemental to the base budget, I am not sure how much real progress we are going to be able to make, especially as we look at other agencies and see double-digit percentage increases.

Further, the lack of a 5-year plan hampers our ability to review this request for the reformed budget it is supposed to be.

While we understand the importance of the QDR, the combination of a late-budget submission and no-outyear data, while not unusual for the first year of a new administration, makes our job a little more difficult.

Despite these challenges, the subcommittee will continue to work with you in a true bipartisan fashion to make sure that we have the necessary resources available to you to accomplish your mission.

Further, I appreciate your commitment to our men and women in uniform and your willingness to make the difficult decisions included in this request, something that is not always easy in this environment.

So, welcome, and I look forward to your comments and your testimony, and commit to continuing to work with you in a support role as we work through your fiscal year 2010 budget.

Thank you very much for being here.

Thank you, Mr. Chairman.

REMARKS OF MR. OBEY

Mr. OBEY. Thank you, Mr. Chairman.

Gentlemen, I don't have any comments on the year's coming budget.

I do just want to make one observation about the supplemental, and I hope that you and the administration understand that the number of votes that were cast against the supplemental last week, I think, significantly understate the concern that a lot of people have in Congress about events in Afghanistan and Pakistan.

I think that virtually all of us understand the desirability of trying to stabilize the situation in Afghanistan and in Pakistan, and my comments should not be seen in any way as questioning the, quote, "policy decisions" that the administration is making in that arena.

What I do have substantial doubt about is the capacity of the Afghan Government and the Pakistani Government to demonstrate that they are useful tools in leading to the stabilization of those two countries.

I do not, in any way, want to see the Congress impose deadlines or timelines or conditions on the use of the money that we have appropriated for the last year; but I do think we have a right, as the legislation does as it left the House, to lay out certain standards of conduct or, rather, standards of performance that both governments should be meeting in order to justify continued support.

It just seems to me that the American taxpayers have a right—when they are pumping this much money in and when so many of their sons and daughters are being committed in the area, I think they have a right to expect that over the next year we will see some significant progress in the focus, determination, coherence and sense of purpose of both of those governments.

So I hope that—I don't want to—I don't think it is wise for us to be in a position of lecturing either government, but I also believe that they need to understand that the patience of the American public is not inexhaustible, and if they expect us to continue this effort, they need to show a sense of purpose and a sense of unity, which, heretofore, they have not demonstrated.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Lewis.

REMARKS OF MR. LEWIS

Mr. LEWIS. Thank you very much, Mr. Chairman.

Secretary Gates, Admiral Mullen, Comptroller Hale, welcome to what is a very, very important beginning of your season.

To say the least, the pressure within the Congress, from my perspective, to raise significant appropriations budgets in every other piece of government and to put the lid on your funding is a challenge that is very real. Frankly, I feel that Secretary Gates' ap-

pointment should be encouraging to all of us who care about really impacting that future and maintaining this priority.

In the meantime, as we go to questions, Mr. Chairman, when we get to it, I have a major program I would like to discuss, but I will wait until then.

Mr. MURTHA. Mr. Secretary, if you will summarize your statement—and, Admiral and Comptroller, we will—without objection, we will put your full statements in the record.

SUMMARY STATEMENT OF SECRETARY GATES

Secretary GATES. Thank you, Mr. Chairman.

Mr. Chairman, Representative Young, Chairman Obey, members of the committee, thank you for inviting us to discuss the details of the President's fiscal year 2010 defense budget. There is a lot of material here, and I know you have a lot of questions, so I will keep my opening remarks brief and focus on the strategy and thinking behind many of these recommendations.

As you suggested, my submitted testimony has more detailed information on specific programmatic decisions.

First and foremost, as Mr. Young indicated, this is a reform budget reflecting lessons learned in Iraq and Afghanistan. It also addresses the range of potential threats around the world now and in the future.

I was recently in Afghanistan. As we increase our presence there and refocus our efforts with a new strategy, I wanted to get a sense from the ground level of the challenges and needs, so we can give our troops the equipment and support to be successful and to come home safely. Indeed, listening to our troops and commanders, unvarnished and unscripted, has, from the moment I took this job, been the greatest single source of ideas on what the Department needs to do both operationally and institutionally. As I told a group of soldiers in Afghanistan, they have done their job. Now it is time for us in Washington to do ours.

In many respects, this budget builds on all the meetings I have had with troops and commanders and all that I have learned over the past 2½ years, all underpinning this budget's three principal objectives:

First, to reaffirm our commitment to take care of the all-volunteer force which, in my view, represents America's greatest strategic asset. As Admiral Mullen says, If we don't get the people part of this business right, none of the other decisions will matter.

Second, to rebalance the Department's programs in order to institutionalize and enhance our capabilities to fight the wars we are in and the scenarios we are most likely to face in the years ahead, while at the same time providing a hedge against other risks and contingencies.

And, third, in order to do this, we must reform how and what we buy, making a fundamental overhaul of our approach to procurement, acquisition and contracting.

From these priorities flow a number of strategic considerations, more of which are included in my submitted testimony.

The base budget request is for \$533.8 billion for fiscal year 2010, a 4 percent increase over the fiscal year 2009 enacted level. After inflation, that is 2.1 percent real growth. In addition, the Depart-

ment's budget request includes \$130 billion to support overseas contingent operations, principally in Iraq and Afghanistan.

I know that there has been discussion about whether this is, in fact, sufficient to maintain our defense posture, especially during a time of war. I believe that it is. Indeed, I have warned in the past that our nation must not do what we have done after previous times of conflict on so many occasions and slash defense spending. I can assure you that I will do everything in my power to prevent that from happening on my watch.

This budget is intended to help steer the Department of Defense towards an acquisition and procurement strategy that is sustainable over the long term, that matches real requirements to needed and feasible capabilities.

As you know, this year we have funded the costs of the war through the regular budgeting process, as opposed to emergency supplementals. By presenting this budget, together, we hope to give a more accurate picture of the cost of the wars and also to create a more unified budget process to decrease some of the churn usually associated with funding for this Department.

This budget aims to alter many programs and many of the fundamental ways that the Department of Defense runs its budgeting acquisition and procurement processes. In this respect, three key points come to mind about the strategic thinking behind the decisions:

First, sustainability. By that I mean sustainability in light of current and potential fiscal constraints. It is simply not reasonable to expect the defense budget to continue increasing at the same rate it has over the last number of years. We should be able to secure our Nation with a base budget of more than a half a trillion dollars, and I believe this budget focuses money where it can more effectively do that.

I also mean sustainability of individual programs. Acquisition priorities have changed from Defense Secretary to Defense Secretary, administration to administration, and Congress to Congress. Eliminating waste, ending requirements creep, terminating programs that go too far outside the line and bringing annual costs for individual programs down to more reasonable levels will reduce this friction.

Second, balance. We have to be prepared for the wars we are most likely to fight, not just the ones we have traditionally been best suited to fight or threats we conjure up from potential adversaries who in the real world also have finite resources.

As I said before, even when considering challenges from nation-states with modern militaries, the answer is not necessarily buying more technologically advanced versions of what we built on land, sea and in the air to stop the Soviets during the Cold War.

And finally there are the lessons learned from the last 8 years on the battlefield and perhaps, just as importantly, institutionally at the Pentagon. The responsibility of this Department, first and foremost, is to fight the Nation's and win the Nation's wars, not just constantly prepare for them. We have to do both. In that respect, the conflicts we are in have revealed numerous problems that I am working to improve, and this budget makes headway in that respect.

At the end of the day, this budget is less about numbers than it is about how the military thinks about the nature of war and prepares for the future, about how we take care of our people and institutionalize support for the warfighter in the long term, about the role of the services and how we can buy weapons as jointly as we fight, about reforming our requirements and acquisition processes.

I know that some of you will take issue with individual decisions. I would ask, however, that you look beyond specific programs and, instead, at the full range of what we are trying to do, at the totality of the decisions and how they will change the way we prepare for and fight wars in the future.

As you consider this budget and specific programs, I would caution that each program decision is zero sum, a dollar spent for capabilities excess to our real needs is a dollar taken from capability that we do need, often to sustain our men and women in combat and bring them home safely.

Once again, I thank you for your ongoing support of our men and women in uniform, and we look forward to your questions.

[The statement of Secretary Gates follows:]

**STATEMENT OF SECRETARY OF DEFENSE ROBERT M. GATES
HOUSE APPROPRIATIONS COMMITTEE – DEFENSE SUBCOMMITTEE
WEDNESDAY, MAY 20, 2009 – 12:30 P.M.**

INTRODUCTION

Mr. Chairman, Representative Young, members of the committee:

Thank you for inviting me to discuss the details of the President's Fiscal Year 2010 defense budget. First and foremost, this is a reform budget – reflecting lessons learned in Iraq and Afghanistan, yet also addressing the range of other potential threats around the world, now and in the future.

As you may know, I was in Afghanistan recently. As we increase our presence there – and refocus our efforts with a new strategy – I wanted to get a sense from the ground level of what the challenges and needs are so that we can give our troops the equipment and support to be successful and come home safely. Indeed, listening to our troops and commanders – unvarnished and unscripted – has from the moment I took this job been the single greatest source for ideas on what the Department needs to do both operationally and institutionally. As I told a group of soldiers in Afghanistan, they have done their job. Now it is time for us in Washington to do ours. In many respects, this budget builds on all the meetings I have had with service members, and all that I have learned over the past two-and-a-half years – all underpinning this budget's three principal objectives:

- First, to reaffirm our commitment to take care of the all-volunteer force, which, in my view represents America's greatest strategic asset; as Admiral Mullen says, if we don't get the people part of our business right, none of the other decisions will matter;
- Second, to rebalance this department's programs in order to institutionalize and enhance our capabilities to fight the wars we are in and the scenarios we are most likely to face in the years ahead, while at the same time providing a hedge against other risks and contingencies; and
- Third, in order to do all this, we must reform how and what we buy, meaning a fundamental overhaul of our approach to procurement, acquisition, and contracting.

From these priorities flow a number of strategic considerations, which I will discuss as I go through the different parts of the budget.

The base budget request is for \$533.8 billion for FY10 – a four percent increase over the FY09 enacted level. After inflation, that is 2.1 percent real growth. In addition, the Department's budget request includes \$130 billion to support overseas contingency operations, primarily in Iraq and Afghanistan. I know there has been some discussion about whether this is, in fact, sufficient to maintain our defense posture – especially during a time of war. I believe it is. Indeed, I have warned in the past that our nation must not do what we have done after previous times of conflict and slash defense spending. I can assure you that I will do everything in my power to prevent that from happening on my watch. This budget is intended to help steer the Department of Defense toward an acquisition and procurement strategy that is sustainable over the long term – that matches real requirements to needed and feasible capabilities.

I will break this down into three sections: our people, today's warfighter, and the related topics of acquisition reform and modernization.

OUR PEOPLE

Starting with the roll-out of the Iraq surge, my overriding priority has been getting troops at the front everything they need to fight, to win, and to survive while making sure that they and their families are properly cared for when they return. So, the top-priority recommendation I made to the President was to move programs that support the warfighters and their families into the services' base budgets, where they can acquire a bureaucratic constituency and long-term funding. To take care of people, this budget request includes, among other priorities:

- \$136 billion to fully protect and properly fund military personnel costs – an increase of nearly \$11 billion over the FY09 budget level. This means completing the growth in the Army and Marines while halting reductions in the Air Force and Navy. The Marine Corps and Army will meet their respective end-strengths of 202,100 and 547,400 by the end of this fiscal year, so this money will be for sustaining those force levels in FY10 and beyond;
- \$47.4 billion to fund military health care;
- \$3.3 billion for wounded, ill and injured, traumatic brain injury, and psychological health programs, including \$400 million for research and development. We have recognized the critical and permanent nature of these programs by institutionalizing and properly funding these efforts in the base budget; and
- \$9.2 billion for improvements in child care, spousal support, lodging, and education, some of which was previously funded in the bridge and supplemental budgets.

We must move away from ad hoc funding of long-term commitments. Overall, we have shifted \$8 billion for items or programs recently funded in war-related appropriations into the base budget.

TODAY'S WARFIGHTER

As I told the Congress in January, our struggles to put the defense bureaucracies on a war footing these past few years have revealed underlying flaws in the priorities, cultural preferences, and reward structures of America's defense establishment – a set of institutions largely arranged to prepare for conflicts against other modern armies, navies, and air forces. Our contemporary wartime needs must receive steady long-term funding and must have a bureaucratic constituency similar to conventional modernization programs and similar to what I have tried to do with programs to support our troops. The FY10 budget reflects this thinking:

First, we will increase intelligence, surveillance and reconnaissance (ISR) support for the warfighter in the base budget by some \$2 billion. This will include:

- Fielding and sustaining 50 Predator-class unmanned aerial vehicle orbits by FY11 and maximizing their production. This capability, which has been in such high demand in both Iraq and Afghanistan, will now be permanently funded in the base budget. It will represent a 62 percent increase in capability over the current level and 127 percent from over a year ago;
- Increasing manned ISR capabilities such as the turbo-prop aircraft deployed so successfully as part of "Task Force Odin" in Iraq; and
- Initiating research and development on a number of ISR enhancements and experimental platforms optimized for today's battlefield.

Second, we will also spend \$500 million more in the base budget than last year to boost our capacity to field and sustain more helicopters – an urgent demand in Afghanistan right now.

Today, the primary limitation on helicopter capacity is not airframes but shortages of maintenance crews and pilots. So our focus will be on recruiting and training more Army helicopter crews.

Third, to strengthen global partnership efforts, we will fund \$550 million for key initiatives. These include training and equipping foreign militaries to undertake counterterrorism and stability operations.

Fourth, to grow our special operations capabilities, we will increase personnel by more than 2,400 – or four percent – and will buy more aircraft for special operations forces. We will also increase the buy of Littoral Combat Ships (LCS) – a key capability for presence, stability, and counterinsurgency operations in coastal regions – from two to three ships in FY10.

Fifth, to improve our intra-theater lift capacity, we will increase the charter of Joint High Speed Vessels (JHSV) from two to four until our own production program begins deliveries in 2011.

And, finally, we will stop the growth of Army Brigade Combat Teams (BCTs) at 45 versus the previously planned 48, while maintaining the planned increase in end strength to 547,400. This will ensure that we have better-manned units ready to deploy, and help put an end to the routine use of stop loss – which often occurs because certain specialties are in high demand. This step will also lower the risk of hollowing the force.

ACQUISITION REFORM AND INSOURCING

In today's environment, maintaining our technological and conventional edge requires a dramatic change in the way we acquire military equipment. I welcome legislative initiatives in the Congress to help address some of these issues and look forward to working with lawmakers in this regard. This budget will support these goals by:

- Reducing the number of support service contractors from our current 39 percent of the workforce to the pre-2001 level of 26 percent and replacing them with full-time government employees. Our goal is to hire as many as 13,800 new civil servants in FY10 to replace contractors and up to 33,600 new civil servants in place of contractors over the next five years;
- Increasing the size of the defense acquisition workforce, converting 10,000 contractors, and hiring an additional 10,000 government acquisition professionals by 2015 – beginning with 4,080 in FY10; and
- Terminating and delaying programs whose costs are out of hand, whose technologies are immature, or whose requirements are questionable – for example, the VH-71 presidential helicopter.

MODERNIZATION

We must be prepared for the future – prepared for challenges we can see on the horizon and ones that we may not even have imagined. I know that some people may think I am too consumed by the current wars to give adequate consideration to our long-term acquisition needs. This budget provides \$186 billion for modernization, which belies that claim.

As I went through the budget deliberations process, a number of principles guided my decisions:

The first was to halt or delay production on systems that relied on promising, but as yet unproven, technologies, while continuing to produce – and, as necessary, upgrade – systems that are best in class and that we know work. This was a factor in my decisions to cancel the

Transformational Satellite (TSAT) program and instead build more Advanced Extremely High Frequency (AEHF) satellites.

Second, where different modernization programs within services existed to counter roughly the same threat, or accomplish roughly the same mission, we must look more to capabilities available across the services. While the military has made great strides in operating jointly over the past two decades, procurement remains overwhelmingly service-centric. The Combat Search and Rescue helicopter, for example, had major development and cost problems to be sure. But what cemented my decision to cancel this program was the fact that we were on the verge of launching yet another single-service platform for a mission that in the real world is truly joint. This is a question we must consider for all of the services' modernization portfolios.

Third, I looked at whether modernization programs had incorporated the experiences of combat operations since September 11th. This was particularly important to the ground services, which will be in the lead for irregular and hybrid campaigns of the future. The Future Combat Systems' ground vehicle component was particularly problematic in this regard.

Fourth, I concluded we needed to shift away from the 99 percent "exquisite" service-centric platforms that are so costly and so complex that they take forever to build, then are deployed in very limited quantities. With the pace of technological and geopolitical change, and the range of possible contingencies, we must look more to the 80 percent multi-service solution that can be produced on time, on budget, and in significant numbers.

This relates to a final guiding principle: the need for balance – to think about future conflicts in a different way – to recognize that the black and white distinction between irregular war and conventional war is an outdated model. We must understand that we face a more complex future than that, a future where all conflict will range across a broad spectrum of operations and lethality. Where near-peers will use irregular or asymmetric tactics that target our traditional strengths. And where non-state actors may have weapons of mass destruction or sophisticated missiles. This kind of warfare will require capabilities with the maximum possible flexibility to deal with the widest possible range of conflict.

Overall, we have to consider the right mix of weapons and platforms to deal with the span of threats we will likely face. The goal of our procurement should be to develop a portfolio – a mixture of capabilities whose flexibility allows us to respond to a spectrum of contingencies. It is my hope that the Quadrennial Defense Review will give us a more rigorous analytical framework for dealing with a number of these issues. That is one reason I delayed a number of decisions on programs such as the follow-on manned bomber, the next generation cruiser, as well as overall maritime capabilities. But where the trend of future conflict is clear, I have made specific recommendations.

AIR CAPABILITIES

This budget demonstrates a serious commitment to maintaining U.S. air supremacy, the sine qua non of American military strength for more than six decades. The key points of this budget as it relates to air capabilities are:

- An increase in funding from \$6.8 to \$10.4 billion for the fifth-generation F-35, which reflects a purchase of 30 planes for FY10 compared to 14 in FY09. This money will also accelerate the development and testing regime to fix the remaining problems and avoid the development issues that arose in the early stages of the F-22 program. More than 500 F-35s will be produced over the next five years, with more than 2,400 total for all the services. Russia is probably six years away from Initial Operating Capability of a fifth-

generation fighter and the Chinese are 10 to 12 years away. By then we expect to have more than 1,000 fifth-generation fighters in our inventory;

- This budget completes the purchase of 187 F-22 fighters – representing 183 planes plus the four funded in the FY09 supplemental to replace one F-15 and three F-16s classified as combat losses;
- We will complete production of the C-17 airlifter program this fiscal year. Our analysis concludes that we have enough C-17s with the 205 already in the force and currently in production to meet current and future needs;
- To replace the Air Force’s aging tanker fleet, we will maintain the KC-X aerial refueling tanker schedule and funding, with the intent to solicit bids this summer. Our aging tankers, the lifeblood of any expeditionary force, are in serious need of replacement;
- We will retire approximately 250 of the oldest Air Force tactical fighter aircraft in FY10; and
- Before continuing with a program for a next-generation manned bomber, we should first assess the requirements and what other capabilities we might have for this mission – and wait for the outcome of the Quadrennial Defense Review, the Nuclear Posture Review, and the outcome of post-START arms-control negotiations.

MARITIME CAPABILITIES

The United States must not take its current maritime dominance for granted and needs to invest in programs, platforms, and personnel to ensure that dominance in the future. But rather than go forward under the same assumptions that guided our shipbuilding during the Cold War, I believe we need to reconsider a number of assumptions – a process that will, as I mentioned, be greatly helped by the QDR.

We must examine our blue-water fleet and the overall strategy behind the kinds of ships we are buying. We cannot allow more ships to go the way of the DDG-1000: since its inception the projected buy has dwindled from 32 to three as costs per ship have more than doubled.

The healthy margin of dominance at sea provided by America’s existing battle fleet makes it possible and prudent to slow production of several shipbuilding programs. This budget will:

- Shift the Navy Aircraft Carrier program to a five-year build cycle, placing it on a more fiscally sustainable path. This will result in a fleet of 10 carriers after 2040;
- Delay the Navy CG-X next generation cruiser program to revisit both the requirements and acquisition strategy; and
- Delay amphibious ship and sea-basing programs such as the 11th Landing Platform Dock (LPD) ship and the Mobile Landing Platform (MLP) ship to FY11 in order to assess costs and analyze the amount of these capabilities the nation needs.

The Department will continue to invest in areas where the need and capability are proven by:

- Accelerating the buy of the Littoral Combat Ship, which, despite its development problems, is a versatile ship that can be produced in quantity and go to places that are either too shallow or too dangerous for the Navy’s big, blue-water surface combatants;
- Adding \$200 million to fund conversion of six additional Aegis ships to provide ballistic missile defense capabilities;
- Beginning the replacement program for the Ohio class ballistic missile submarine; and

- Using FY10 funds to complete the third DDG-1000 Destroyer and build one DDG-51 Destroyer. The three DDG-1000 class ships will be built at Bath Iron Works in Maine and the DDG-51 Aegis Destroyer program will be restarted at Northrop Grumman's Ingalls shipyard in Mississippi.

LAND CAPABILITIES

As we have seen these last few years, our land forces will continue to bear the burdens of the wars we are in – and also the types of conflicts we may face in the future, even if not on the same scale. As I said earlier, we are on track with the expansion of the ground forces, and have added money for numerous programs that directly support warfighters and their families.

Since 1999, the Army has been pursuing its Future Combat Systems – an effort to simultaneously modernize most of its platforms, from the way individual soldiers communicate to the way mechanized divisions move. Parts of the FCS program have already demonstrated their adaptability and relevance to today's conflicts. For example, the connectivity of the Warfighter Information Network will dramatically increase the agility and situational awareness of the Army's combat formations.

But the FCS vehicle program is, despite some adjustments, based on the same assumptions as when FCS was first conceived. The premise behind the design of these vehicles is that lower weight, greater fuel efficiency, and, above all, near-total situational awareness, compensate for less heavy armor – a premise that I believe was belied by the close-quarters combat, urban warfare, and increasingly lethal forms of ambush that we've seen in both Iraq and Afghanistan. I would also note that the current vehicle program does not include a role for our recent \$25 billion investment in the MRAP vehicles being used to good effect in today's conflicts.

With that in mind:

- We have canceled the existing FCS ground vehicle program, and will reevaluate the requirements, technology, and approach and then relaunch a new Army vehicle modernization program, including a competitive bidding process;
- The FCS budget in FY10 is \$3 billion. I have directed that the new FCS program be fully funded in the out-years; and
- We will accelerate FCS's Warfighter Information Network development and field it, along with proven FCS spin-off capabilities, across the entire Army.

MISSILE DEFENSE

The United States has made great technological progress on missile defense in the last two decades, but a number of questions remain about certain technologies and the balance between research and development on one hand, and procurement on the other. This is one area where I believe the overall sustainability of the program depends on our striking a better balance. To this end, this budget will:

- Restructure the program to focus on the rogue state and theater missile threat. We will not increase the number of current ground-based interceptors in Alaska as had been planned. But we will continue to robustly fund research and development to improve the capability we already have to defend against long-range rogue missile threats – threats that North Korea's missile launch last month reminds us are real;
- Cancel the second airborne laser (ABL) prototype aircraft. We will keep the existing aircraft and shift the program to an R&D effort. The ABL program has significant

affordability and technology problems and the program's proposed operational role is highly questionable;

- Terminate the Multiple Kill Vehicle (MKV) program because of its significant technical challenges and the need to take a fresh look at the requirement. Overall, the Missile Defense Agency program will be reduced by \$1.2 billion; and
- Increase by \$700 million funding for our most capable theater missile defense systems like the THAAD and SM-3 programs.

CYBER SECURITY

To improve cyberspace capabilities, this budget:

- Increases funding for a broad range of Information Assurance capabilities to improve the security of our information as it is generated, stored, processed, and transported across our IT systems;
- Increases the number of cyber experts this department can train from 80 students per year to 250 per year by FY11; and
- Establishes a cyber test range.

There is no doubt that the integrity and security of our computer and information systems will be challenged on an increasing basis in the future. Keeping our cyber infrastructure safe is one of our most important national-security challenges. While information technology has dramatically improved our military capabilities, our reliance on data networks has at the same time left us more vulnerable. Our networks are targets for exploitation, and potentially disruption or destruction, by a growing number of entities that include foreign governments, non-state actors, and criminal elements.

The President's cyberspace policy review will shortly report its findings and recommendations. I expect this document will offer strategic perspective for the Department in determining how best to defend the government and nation against cyber threats from state and non-state actors alike.

OVERSEAS CONTINGENCY OPERATIONS

As you know, this year we have funded the costs of the wars through the regular budgeting process – as opposed to emergency supplementals. By presenting this budget together, we hope to give a more accurate picture of the costs of the wars and also create a more unified budget process to decrease some of the churn usually associated with funding for the Department of Defense.

We are asking for \$130 billion to directly support the missions in Iraq and Afghanistan. This is less than the \$141.7 billion we asked for last year through the bridge fund and the remaining supplemental request – which in part reflects shifting some programs into the base budget.

The OCO request includes \$74.1 billion to maintain our forces in Afghanistan and Iraq – from pre-deployment training, to transportation to or from theater, to the operations themselves.

- In Afghanistan, this will support an average of 68,000 military members and six Brigade Combat Team (BCT) equivalents – plus support personnel; and
- In Iraq, this will fund an average of 100,000 military members, but also reflects the President's decision to cut force levels to six Advisory and Assistance Brigades by August 31, 2010. Compared to the FY08 enacted levels for Operation Iraqi Freedom, we are asking for less than half.

Aside from supporting direct operations, the OCO funding also includes, among other programs:

- \$17.6 billion to replace and repair equipment that has been worn-out, damaged, or destroyed in theater. The major items include helicopters, fixed-wing aircraft, trucks, Humvees, Bradleys, Strykers, other tactical vehicles, munitions, radios, and various combat support equipment;
- \$15.2 billion for force protection, which includes \$5.5 billion for MRAPs – \$1.5 billion to procure 1,080 new MRAP All Terrain Vehicles (ATV) for Afghanistan and \$4 billion for sustainment, upgrades, and other costs for MRAPs already fielded or being fielded.
- \$7.5 billion for the Afghan National Security Forces (ANSF). Ultimately, the Afghan people will shoulder the responsibility for their own security, so we must accelerate our training of their security forces in order to get more Afghans into the fight;
- \$1.5 billion for the Commander’s Emergency Response Fund (CERP) – a program that has been very successful in allowing commanders on the ground to make immediate, positive impacts in their areas of operation. It will continue to play a pivotal role as we increase operations in Afghanistan and focus on providing the population with security and opportunities for a better life. I should note that the Department has taken a number of steps to ensure the proper use of this critical combat-enhancing capability;
- \$1.4 billion for military construction – most of which will go toward infrastructure improvements in Afghanistan to support our increased troop levels; and
- \$700 million for the Pakistan Counterinsurgency Capability Fund (PCCF). This program will be carried out with the concurrence of the Secretary of State and will complement existing and planned State Department efforts by allowing the CENTCOM commander to work with Pakistan’s military to build counterinsurgency capability. I know there is some question about funding both the PCCF and the Foreign Military Financing program, but we are asking for this authority for the unique and urgent circumstances we face in Pakistan – for dealing with a challenge that simultaneously requires military and civilian capabilities. This is a vital element of the President’s new Afghanistan-Pakistan strategy.

CONCLUSION

Let me close with a few final thoughts.

This budget aims to alter many programs, and many of the fundamental ways that the Department of Defense runs its budgeting, acquisition, and procurement processes. In this respect, three key points come to mind about the strategic thinking behind these decisions.

First of all, sustainability. By that, I mean sustainability in light of current and potential fiscal constraints. It is simply not reasonable to expect the defense budget to continue increasing at the same rate it has over the last number of years. We should be able to secure our nation with a base budget of more than half a trillion dollars – and I believe this budget focuses money where it can more effectively do just that.

I also mean sustainability of individual programs. Acquisition priorities have changed from defense secretary to defense secretary, administration to administration, and congress to congress. Eliminating waste, ending “requirements creep,” terminating programs that go too far outside the line, and bringing annual costs for individual programs down to more reasonable levels will reduce this friction.

Second of all, balance. We have to be prepared for the wars we are most likely to fight – not just the wars we have traditionally been best suited to fight, or threats we conjure up from

potential adversaries who, in the real world, also have finite resources. As I've said before, even when considering challenges from nation-states with modern militaries, the answer is not necessarily buying more technologically advanced versions of what we built – on land, at sea, or in the air – to stop the Soviets during the Cold War.

Finally, there are all the lessons learned from the last eight years – on the battlefield and, perhaps just as important, institutionally back at the Pentagon. The responsibility of this department first and foremost is to fight and win wars – not just constantly prepare for them. In that respect, the conflicts we are in have revealed numerous problems that I am working to improve; this budget makes real headway in that respect.

At the end of the day, this budget is less about numbers than it is about how the military thinks about the nature of warfare and prepares for the future. About how we take care of our people and institutionalize support for the warfighter for the long term. About the role of the services and how we can buy weapons as jointly as we fight. About reforming our requirements and acquisition processes.

I know that some of you will take issue with individual decisions. I would, however, ask you to look beyond specific programs, and instead at the full range of what we are trying to do – at the totality of the decisions and how they will change the way we prepare for and fight wars in the future.

Once again, I thank you for your ongoing support of our men and women in uniform. I look forward to your questions.

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SUMMARY STATEMENT OF ADMIRAL MULLEN

Admiral MULLEN. Mr. Chairman, Mr. Young, Mr. Obey, Mr. Lewis, distinguished members of this committee, thank you for the opportunity to appear before you here today.

Let me start off by saying. I not only support the President's fiscal year 2010 budget submission for this Department, but more specifically, the manner in which Secretary Gates developed it. He presided over a comprehensive and collaborative process, the likes of which, quite frankly, I have not seen in more than a decade of doing this sort of work in the Pentagon. Over the course of several months and a long series of meetings and debates, every service chief and every combatant commander had a voice and every single one of them used it.

Now, normally, budget proposals are worked from the bottom up with each service making the case for specific programs and then fighting it out at the end to preserve those that are most important to them. This proposal was done from the top down. Secretary Gates gave us broad guidance, his overall vision, and then he gave us the opportunity to meet it.

Everything was given a fresh look and everything had to be justified. Decisions to curtail or eliminate a program are based solely on its relevance and on its execution. The same can be said for those we decided to keep, and I can tell you this: None of the final decisions were easy, but all of them are vital to our future.

It has been said that we are what we buy. I really believe that. And I also believe that the force we are asking you to help us buy today is the right one, both for the world we are living in and the world we may find ourselves living in 20 to 30 years down the road.

This submission before you is just as much a strategy as it is a budget. And let me tell you why I believe that. First, it makes people our top strategic priority. I have said many times and remain convinced the best way to guarantee our future security is to support our troops and their needs and the needs of their families.

It is the recruit-and-retain choices of our members and their families and, quite frankly, the American citizens writ large that will make or break the all-volunteer force. They will be less inclined to make those decisions should we not be able to offer them viable career options, adequate health care, suitable housing, advanced education and the promise of a prosperous life long after they have taken off the uniform.

This budget devotes more than a third of the total request to what I would call the people account, with the great majority of that figure, nearly \$164 billion, going to military pay and health care. When combined with what we plan to devote to upgrading and modernizing family housing and facilities, the total comes to \$187 billion, \$11 billion more than we asked for last year, and almost all of that increase will go to family support programs.

I am particularly proud of the funds we have dedicated to caring for our wounded. There is, in my view, no higher duty for this Nation or for those of us in leadership positions than to care for those who sacrifice so much and who must now face lives forever changed by wounds both seen and unseen. I know you share that feeling,

and I thank you for the work you have done in this committee and throughout the Congress to pay attention and support these needs.

And I would add to that the families of the fallen. Our commitment to them must be for the remainder of those lives. That is why this budget allocates funds to complete the construction of additional wounded warrior complexes, expands a pilot program designed to expedite the processing of injured troops through the disability evaluation system, increases the number of mental health professionals assigned to deployed units and devotes more resources to the study and treatment of post-traumatic stress and traumatic brain injuries.

After nearly 8 years of war we are in the most capable and combat-experienced military we have ever been, certainly, without question, the world's best counterinsurgency force. Yet for all this success, we are pressed and still lack a proper balance between op tempo and home tempo, between coin capabilities and conventional capabilities, between readiness today and readiness tomorrow.

And that, Mr. Chairman, is the second reason this budget of ours acts as a strategy for the future. It seeks balance by investing more heavily in critical enablers such as aviation, special forces, cyber operations, civil affairs and language skills. It rightly makes winning the wars we are in our top operational priority. By adjusting active Army BCT growth to 45 it helps ensure our ability to help impact the fight sooner, increase dwell time and reduce overall demand on equipment. And by authorizing Secretary Gates to transfer money to the Secretary of State for reconstruction, security or stabilization, it puts more civilian professionals alongside warfighters in more places like Iraq and Afghanistan.

Having just returned from a trip to Afghanistan, I can attest to the critical need for more civilian capacity. I was shocked to learn there are only 13 U.S. civilian development experts in all of southern Afghanistan, where the Taliban movement is strongest and the local economy is almost entirely dependent on opium production. We have twice that many working in the relatively peaceful Kurdish region of northern Iraq.

I have said it before, but it bears repeating, more boots on the ground are important, but they are not the complete answer. We need people with slide rules and shovels and teaching degrees, bankers and farmers and law enforcement experts. As we draw down responsibly in Iraq and shift the main effort to Afghanistan, we need a more concerted effort to build up the capacity of our partners.

The same can be said of Pakistan where boots on the ground aren't even an option, where helping the Pakistani forces help themselves is truly our best and only recourse.

Some will argue this budget devotes too much money to these sorts of low-intensity needs, that it tilts dangerously away from conventional capabilities. It does not. A full 35 percent of the submission is set aside for modernization, and much of that will go to what we typically consider conventional requirements. We know there are global risks and threats out there not tied directly to the fight against al Qaeda and other extremist groups, and we are going to be ready for them.

In all this, Mr. Chairman, we are also working hard to fix a flawed procurement process. More critically, in my view, the Nation is getting the military it needs for the challenges we face today and the ones we will likely face tomorrow.

Thank you and this committee for your continued support of that important work and for all you do to support the men and women of the United States military and their families.

[The statement of Admiral Mullen follows:]

Posture Statement of
Admiral Michael G. Mullen, USN
Chairman of the Joint Chiefs of Staff
Before the 111th Congress
House Appropriations Subcommittee on Defense

Chairman Murtha, Representative Young, distinguished members of the committee, it is my privilege to report on the posture of the United States Armed Forces.

First, I would like to thank our Service men and women and their families. Those who defend this Nation and the families who support them remain our most valuable national assets and deserve continued gratitude. I want especially to honor the sacrifices of our wounded, their families, and the families of the fallen. We are redefining our duty to them as a Nation, a duty which I believe lasts for life. I thank everyone in this distinguished body for their continued efforts in support of this cause.

Your Armed Forces stand as the most combat experienced in this Nation's history. Deeply experienced from decades of deployments in harm's way and from seven and a half years of war, they have remained resilient beyond every possible expectation. They make me, and every American, very proud.

I am grateful for your understanding of the stress our Armed Forces and their families are under. Your recognition of their burdens and uncertainties has been a vital constant throughout these challenging times. Thank you for your support of initiatives such as transferring G.I. Bill benefits to military spouses and children, military spouse employment support, expanded childcare and youth programs, homeowner's assistance programs, and, most importantly, long-term comprehensive support of Wounded Warrior families.

This testimony comes after a notable transition of Administration, the first during wartime since 1968 and the first since the 9-11 attacks on the homeland.

Conducted in the face of threats and continued wartime missions overseas, the transition was marked by courtesy and concern for the mission and our forces from start to finish. Transition obviously means change, but in this case, it also meant continuity in providing for the common defense. Continuity has been and is particularly important at this juncture as we implement the key strategic changes underway that end the war in Iraq through a transition to full Iraqi responsibility and reinforce a whole of government effort in Afghanistan and Pakistan.

While several key developments have emerged since I last testified, in particular the global economic crisis, the three strategic priorities for our military that I outlined last year remain valid. First, we must continue to improve stability and defend our vital national interests in the broader Middle East and South Central Asia. Second, we must continue efforts to reset, reconstitute, and revitalize our Armed Forces. Third, we must continue to balance global strategic risks in a manner that enables us to deter conflict and be prepared for future conflicts. The three strategic priorities are underpinned by the concept of persistent engagement, which supports allies and partners through programs abroad and at home and which must be led by and conducted hand-in-hand with our interagency partners to achieve sustainable results.

Key Developments

Over the past year your Armed Forces continued to shoulder a heavy burden worldwide, particularly in the Middle East and South Central Asia. Our emphasis has rightfully remained on the ongoing wars in Afghanistan and Iraq and against al-Qaeda extremists, though we remain ready to face other global challenges.

Per the President's guidance on February 27th, we will end our combat mission in Iraq by August 31, 2010. The Joint Chiefs and I believe this is a prudent course given the sustained security gains we have seen to date and Iraq's positive trajectory. This current plan preserves flexibility through early 2010 by

conducting the majority of the drawdown after the Iraqi election period. In the meantime, our troops are on course to be out of Iraqi cities by June of this year and two more brigades will return to the United States without replacement by the end of September. Drawing down in Iraq is not without risks. Lingering political tensions remain and violence could flare from time to time. Assuming no major surprises, however, we will successfully transition fully to the advise and assist mission over the next 16 months and lay the groundwork for a continued partnership with Iraq that promotes security in the region.

In Afghanistan and Pakistan we are providing additional resources to address the increase in violence. The strategic goal as outlined by the President on March 27, 2009, is to disrupt, dismantle, and defeat al-Qaeda and its extremist allies in Pakistan and Afghanistan and to prevent their return to either country. As that strategy was being developed, we began responding to conditions on the ground by reinforcing the International Security and Assistance Force commander with some 17,700 troops, the majority of which will arrive by this summer. Our aim in Afghanistan is to check the momentum of the insurgency, train additional forces, and ensure security for the Afghan national elections in August, while in Pakistan we will work with the Pakistani military to further develop their counterinsurgency skills and build stronger relationships with Pakistani leaders at all levels.

We will shift the main effort from Iraq to Afghanistan in the coming year, though our residual footprint in Iraq will remain larger than in Afghanistan until well into 2010. The strategic environment we face beyond these ongoing conflicts is uncertain and complex. In the near term, we will maintain focus on threats to our vital national interests and our forces directly in harm's way. Increasingly, the greatest mid-term military threats will come from transnational concerns – the proliferation of nuclear weapons and missile technology, transnational terrorism, competition over energy, water, and other vital resources, natural disasters and pandemics, climate change, and space vulnerabilities.

A prominent aspect of this shifting strategic environment is the disturbing trend in cyber attacks, where we face both state and non-state actors.

Cyberspace is a borderless domain wherein we operate simultaneously with other U.S. government agencies, allies, and adversaries. Effectiveness is increasingly defined by how well we share information, leverage technology, and capitalize on the strength of others. When appropriate, DoD will lead. Likewise, when appropriate, DoD will provide support and ensure collective success. Our national security and that of our allies is paramount.

A critical new challenge has been added to the strategic environment – the global economic crisis. Although we do not fully understand the impact or depth of this worldwide recession, dire economic conditions increase the pressures for protectionism. They also staunch the flow of remittances, which provide enormous benefits to developing nations. Prolonged downturns can generate internal strife, authoritarian rule, virulent nationalism, manufactured crises, and state conflict. Decreased energy prices have also affected the global economy, on one hand reducing the resources available to some malicious actors, but on the other hand hurting some key allies. Any conflict involving a major energy producer, however, could escalate prices rapidly, which would undoubtedly hamper prospects for a quicker global recovery. Economic concerns will increasingly be the lens through which we – and our partners and competitors – filter security considerations. Many nations may decrease expenditures on defense and foreign assistance, thus making the pool of collective resources we have to address challenges smaller. We will work through our routine military-to-military contacts to address this tendency directly and help to coordinate priorities, emphasizing that we are all bound together in this global economy.

Winning our Nation's current and future wars requires concurrent efforts to restore the vitality of the Armed Forces and balance global risk. I am grateful for Congress's continued support of the programs designed to return our units to the desired levels of readiness and for the honest debate engendered in these chambers to ascertain national interests and determine the best mix of capabilities and programs to protect those interests. The ability to debate these national choices – openly and transparently – is just one of the attractive features of our Republic that others seek to emulate.

Our military remains capable of protecting our vital national interests. At the same time, the strain on our people and equipment from more than seven years of war has been tremendous. There is no tangible “peace dividend” on the horizon given the global commitments of the United States. We still face elevated levels of military risk associated with generating additional ground forces for another contingency should one arise. I do not expect the stress on our people to ease significantly in the near-term given operations in the Middle East, the strategic risk associated with continued regional instability in South Central Asia, and the uncertainty that exists globally. Over the next two years the number of forces deployed will remain high. The numbers will reduce, but at a gradual pace. The drawdown in Iraq is weighted in 2010, with the bulk of the combat brigades coming out after the Iraqi elections. At the same time, through the course of 2009 and into 2010, we will be reinforcing the effort in Afghanistan. Only in 2011 can we expect to see marked improvements in the dwell time of our ground forces.

We can not – and do not – face these global challenges alone. We benefit greatly from networks of partners and allies. Despite the economic downturn, the bulk of the world’s wealth and the majority of the world’s most capable militaries are found in those nations we call friends. Persistent engagement maintains these partnerships and lays the foundation upon which to build effective, collective action in times of security and economic crisis. In the coming years we must be careful not to shunt aside the steady work required to sustain these ties. By maintaining regional security partnerships, developing and expanding effective information sharing networks, and continuing military-to-military outreach, we improve the ability to monitor the drivers of conflict and help position our Nation for engagement rather than reaction. Such engagement also propels us toward the common good, relieves some of the burden on our forces, improves the protection of the homeland, and helps secure U.S. vital national interests.

Defend Vital National Interests in the broader Middle East and South Central Asia

Given its strategic importance and our vital national interests, the United States will continue to engage in the broader Middle East and South Central Asia – as a commitment to friends and allies, as a catalyst for cooperative action against violent extremism, as a deterrent against state aggression, as an honest broker in conflict resolution, and as a guarantor of access to natural resources. Yet we recognize that our presence in these regions can be more productive with a lower profile. The Iraq drawdown is the first step on the path to that end.

Attaining our goals in these critical regions requires time, resources, and endurance. Most of the challenges in the region are not military in nature and can only be met successfully from within. Our role remains one essentially of consistent, transparent partnership building. These actions send an unmistakable message to all that the U.S. remains committed to the common good, while steadily expanding the sets of partnerships available to address future challenges.

Central to these efforts in the Middle East and South Central Asia will be the relentless pressure we maintain on al-Qaeda and its senior leadership. Al-Qaeda's narrative will increasingly be exposed as corrupt and self-limiting. Though too many disaffected young men still fall prey to al-Qaeda's exploitation, I believe the populations in the region will ultimately reject what al-Qaeda offers. Our priority effort will remain against al-Qaeda, but we will also take preventative measures against the spread of like-minded violent extremist organizations and their ideologies to neighboring regions such as the Horn of Africa and the Sahel. The U.S. military's task is to partner with affected nations to combat terrorism, counter violent extremism, and build their capacity to shoulder this same burden.

Afghanistan and Pakistan are central fronts in the fight against al-Qaeda and militant global extremism and must be understood in relation to each other. Afghanistan requires additional resources to counter a growing insurgency partially fed by safe havens and support networks located within Pakistan. Additional U.S. troops will conduct counterinsurgency operations to enhance

population security against the Taliban in south/southwest Afghanistan and to accelerate and improve training and mentoring of Afghan security forces. As in Iraq, our troops will live among the population. We must make every effort to eliminate civilian casualties, not only because this is the right thing to do but also because it deprives the Taliban of a propaganda tool that exploits Afghan casualties and calls into question U.S./NATO endurance and effectiveness in providing security. Although we must expect higher Alliance casualties as we go after the insurgents, their sanctuaries, and their sources of support, our extended security presence must – and will – ultimately protect the Afghan people and limit both civilian and military casualties. Our troops will integrate closely with Afghan forces, with the objective of building Afghan security forces that are capable of assuming responsibility for their country's security.

We expect the reinforcements to have the most pronounced effect over the next 12-24 months. Security gains can only be assured when complemented by development and governance programs designed to build greater self sufficiency over time. Our commanders in the field can lay some of this groundwork through the proven Commanders Emergency Response Program to start smaller projects quickly, but these projects can not compensate for the larger, enduring programs required. A temporary boost in security that is not matched with commensurate political and economic development will not only fail to generate faith in the Afghan government and fail to convince Afghans of our commitment, but also fail to accomplish our objectives. Over time, these objectives will be met more through civilian agencies and non-governmental organizations, with a lighter military presence. Getting to that point, however, requires that military forces generate the security required for political and economic initiatives to take root.

Pakistan is crucial to our success in Afghanistan. In my nine trips to Pakistan, I've developed a deeper understanding of how important it is that we, as a Nation, make and demonstrate a long term commitment to sustaining this partnership. We are taking multiple approaches to rebuild and strengthen relationships and address threats common to both of our nations. One key approach in the near term is to help Pakistan's military to improve its overall –

and specifically its counterinsurgency – capabilities. Beyond the trainers we will continue to provide, the Pakistani Counterinsurgency Capability Fund and Coalition Support Funds. These funding streams provide us the means to address this issue directly, and I ask the Congress to support these initiatives and provide the flexibility to accelerate their implementation. We will ensure that accountability measures are in place so that these funds go exactly where they are intended to go and do not compromise other USG humanitarian assistance objectives. These programs will help the Pakistanis take continued action to combat extremist threats in western Pakistani territories which will complement the reinforcement of troops and special operations efforts in Afghanistan to maintain pressure on al-Qaeda and Taliban leadership. In addition to these initiatives, steady support of the Foreign Military Sales and Foreign Military Financing programs will help us to address the needs expressed by Pakistan's leaders. We will also be well served by the substantially larger request for International Military Education and Training exchanges with Pakistan, to help reconnect our institutions and forge lasting relationships. Military programs must also be supplemented by non-military investment and continued engagement, which further confirm our Nation's long term commitment.

In all, we must recognize the limits of what can be accomplished at what price and at what pace in both countries. This will be a long campaign. We are committed to providing sustained, substantial commitment to Afghanistan and Pakistan. Progress in Afghanistan and Pakistan will be halting and gradual, but we can steadily reduce the threats to our Nation that emanate from conditions in those countries.

In Iraq, we are on the path to stability and long-term partnership as codified in the Security Agreement. Political, ethnic, and sectarian tensions may continue to surface in sporadic bouts of violence. But we also expect that Iraq's Security Forces will continue to improve, malign Iranian influence will not escalate, and, although resilient, al-Qaeda in Iraq will not be able to regroup and reestablish the control it once had. I am heartened by the conduct of Iraq's

provincial elections in January and the election of a new Speaker of the Council of Representatives and expect additional political progress in the coming year.

The drawdown in Iraq carries inherent risks. But the plan that is underway provides sufficient flexibility for the ground commander to adjust to Iraqi political and security developments and to deal with the unexpected. We are currently working with Multi-National Force-Iraq, CENTCOM, SOCOM, TRANSCOM, and the Services on the mechanics of the drawdown and the composition of the roughly 35,000 to 50,000 strong transition force that will remain in Iraq after August 31, 2010, to advise and assist the Iraqi Security Forces, conduct counter terrorism operations, and provide force protection to civilian agencies.

The Iranian government continues to foment instability in the broader Middle East. We have two primary concerns: Iran's sponsorship of violent surrogates and pursuit of a nuclear weapons capability. Iran's Islamic Revolutionary Guard Corps orchestrates the activities of its proxies in Iraq and Afghanistan, across the Levant, and beyond. Through these proxies, Iran inserts itself into the Israeli-Palestinian situation by its direct support of Hamas and Hizballah. Iran's interference beyond its borders causes us to doubt the regime's declared peaceful intent regarding its nuclear program. Evidence suggests that the regime intends to acquire nuclear weapons, even as it continues to disregard UN and international resolutions. In these actions, the Iranian government rejects the opinion as reflected in recent polls of the Iranian population, the majority of who want peaceful, civilian nuclear power but do not want nuclear weapons. Unfortunately, Iran's behavior could well lead to further regional proliferation as other states would seek similar weapons as a hedge – an outcome that would serve neither Iran nor the region. Iran could be an immensely constructive actor in the region, and its choices in the near term will have far reaching consequences. Iran's pursuit of a nuclear weapons capability clearly constitutes a grave threat to U.S. vital national interests in the broader Middle East, and we must use all elements of national power to prevent them from achieving this nuclear capability. In line with the Administration's guidance, we

will continue to work with the international community to convince Iran that the benefits of abandoning its pursuit of nuclear weapons and delivery means far outweigh the costs that would come from the alternative.

Iran's actions provide only one strand of the Weapons of Mass Destruction (WMD) threat emanating from the region. Al-Qaeda has expressed the desire for WMD and their intent to strike the homeland is undisputed. Al-Qaeda would also likely use WMD against populations in the broader Middle East. Consequently, the nexus between violent extremism and the proliferation of WMD remains a grave threat to the United States and our vital national interests. The defeat of al-Qaeda would significantly diminish the threat from this nexus, but does not fully remove it given the conceptual blueprint already established for other extremists. We will continue to support national efforts to counter, limit, and contain WMD proliferation from both hostile state and non-state actors. We will also team with partners inside and outside the broader Middle East to reduce vulnerabilities and strengthen regional governments' confidence that we can address the WMD threat. But we must recognize that this threat requires vigilance for the duration, given the magnitude of damage that can be wrought by even a single incident.

The Israeli-Palestinian conflict, in particular the violence in Gaza in January 2009, continues to cast a pall across the region. The Peace Process is primarily a diplomatic endeavor, but one we support fully through such initiatives as the training and advising of legitimate Palestinian security forces, exchanges with Israeli counterparts, and cooperation with Arab military partners. These initiatives support broader national endeavors aimed at a reduction in violence, greater stability, and peaceful co-existence in this critical region.

Reset, Reconstitute, and Revitalize the Armed Forces

Protecting our Nation's interests in recent years has required the significant commitment of U.S. military forces. Indeed, extensive security tasks remain before us as we pursue the stated objectives in Iraq, Afghanistan and Pakistan,

defeat the al-Qaeda network, prevent the spread of WMD, deter conflict, preserve our ability to project and sustain military power at global distances, and maintain persistent engagement with allies and partners around the globe. At the core of our ability to accomplish all of these tasks are the talented, trained, and well-equipped members of the Armed Forces. I remain convinced that investment in our people is the best investment you make on behalf of our citizens.

The pace of current commitments has prevented our forces from fully training for the entire spectrum of operations. Consequently, readiness to address the range of threats that might emerge has declined. The demands we have put on our people and equipment over the past seven years are unsustainable over the long-term. As we continue to institutionalize proficiency in irregular warfare, we must also restore the balance and strategic depth required to ensure national security. Continued operations that are not matched with appropriate national resources will further degrade equipment, platforms, and, most importantly, our people.

Our Nation's service members and their families are at the core of my efforts to reset, reconstitute, and revitalize our forces. Every decision I make takes into consideration their well being. The All-Volunteer Force has accomplished every mission it has been given, but at a high price. I do not take their service for granted and recognize the limits of their endurance. I remain extremely concerned about the toll the current pace of operations is taking on them and on our ability to respond to crises and contingencies beyond ongoing operations in Iraq and Afghanistan.

The dwell time of units is one key metric we watch closely for the Army and Marine Corps. Dwell time remains at approximately 1:1 for ground units, meaning one year deployed and one year at home for the Army, seven months deployed/seven months at home for the Marine Corps, and similar cycles for the Airmen and Sailors serving in joint expeditionary taskings. Dwell time will improve, but we cannot expect it to return to an interim 1:2 or the desired 1:3 or better for several years given the number of ground forces still tasked with re-posturing to Afghanistan, the advise and assist mission in Iraq after drawdown,

and other global commitments. Special Operations Forces (SOF) face similar deployment cycles but improvements in their dwell time will lag the Army and Marine Corps given the demand for SOF expertise in the irregular warfare environment we face. A key part of the effort to improve dwell time is the continued commitment to the size of the Army, Marine Corps, and Special Operations Forces as reflected in the 2010 budget. Institution of the "Grow the Force" initiative is an indispensable element of the long-term plan to restore readiness.

Our recruiters met the missions of their military departments for fiscal year 2008 and are well on track for fiscal year 2009. The Services have been able to reduce the number of conduct waivers issued and the Army in the recruiting year to date has seen a marked increase in the number of high school graduates joining its ranks, exceeding the Department of Defense Tier 1 Educational Credential Standard of 90% for all three Army components – Active, Army National Guard, and Army Reserve. Retaining combat-proven leaders and the people with the skills we need is just as important. The Services have benefitted from the full range of authorities given to them by Congress as retention incentives. I ask for your continued support of these programs, in particular the bonuses used by the Services to retain key mid-career active duty officers and enlisted. I also ask for your continued support of incentives for Reserve and National Guard service to provide flexibility and enhanced retirement benefits. We have made important strides in the past year in equipping these vital members of the Total Force, and their performance over the past seven years of war has been superb. Economic conditions will ameliorate some of the recruiting and retention pressure in the coming year, but we must recognize that personnel costs will continue to grow as we debate the national level of investment in defense.

As Chairman of the Joint Chiefs of Staff, I have spent the last 18 months meeting with Soldiers, Sailors, Airmen, Marines, Coast Guardsmen, and civilian public servants. In them I recognize the differences in our generations, with the younger ones ever more comfortable with social networking and technology. Yet I

recognize in all of them a strong thread of continuity that stretches back to the Nation's beginnings. That thread is a keen awareness of how they and their influencers – parents, teachers, coaches, and peers – perceive the manner in which today's veterans are treated. Service members know that the American people stand fully behind them, regardless of varying opinions over American policy. The All-Volunteer Force has earned this trust and confidence. This contract must be renewed every day with the American people, who can never doubt that we will be good stewards of their most precious investment in their armed forces – the sons and daughters who serve our Nation.

Emblematic of that stewardship is the way we treat returning Wounded Warriors and the parents, spouses and family members who support them. As a Nation, we have an enduring obligation to those who have shouldered the load and who bear the visible and invisible scars of war, some of whom we unfortunately find in the ranks of the homeless. As leaders, we must ensure that all Wounded Warriors and their families receive the care, training, and financial support they need to become self-sufficient and lead as normal a life as possible – a continuum of care that lasts for life. This continuum extends especially to the families of the fallen. Our focus must be more on commitment rather than compensations, and on transition and ability rather than disability. To the degree that we fail to care for them and their families, and enable their return to as normal a life as possible, we undermine the trust and confidence of the American people.

One other area that has been particularly troubling since I last testified is the rise in the number of service member suicides. The Army in particular has been hit hard by a troubling increase over the past four years and an already disturbing number of suicides in 2009. We do not know precisely why this is occurring, though the increased stress of wartime is certainly a factor. All Service leaders are looking hard at the problem, to include ensuring that we make a service member's ability to seek mental health care both unimpeded and stigma free. This approach requires a cultural change in all of the Services that will take time to inculcate, but the seeds are planted and taking root. The program at Fort

Hood, Texas, is just one example of how a commander-empowered that understands the problem as a result of stress rather than weakness and incorporates families can sharply reduce the number of suicides in a specific community.

The Department and the Services have also continued to expand comprehensive programs designed to prevent sexual abuse in the military. Such abuse is intolerable and an unacceptable betrayal of trust. We will continue work towards the goal of eliminating this crime from our ranks.

Although the strain on our people is most acute, the strain on equipment and platforms is likewise significant. Through the reconstitution effort over the next decade, we will repair, rebuild, and replace the equipment that has been destroyed, damaged, stressed, and worn out beyond repair after years of combat operations. As Congress is well aware, Service equipment has been used at higher rates under harsher conditions than anticipated. The drawdown in Iraq through the end of next summer will provide us even greater first-hand insight into the state of ground force equipment as we retrograde multiple brigade combat team and enabler sets.

Beyond the wear and tear experienced by ground vehicles in Iraq and Afghanistan, our airframes are aging beyond their intended service lives. Indeed since Desert Storm, 18 years ago, the U.S. Air Force and U.S. Navy have flown near continuous combat missions over the Middle East and the Balkans with the F-15s, F-16s, and F-18s that were designed in the 1960s and 1970s and which, with upgrades, have proven their worth repeatedly over time. We have struggled with a wide variety of airframes, as seen in the fleet-wide groundings of all major fighter weapons systems at various times over the past five years, the strains on 30 year old P-3 Orion reconnaissance aircraft, and ongoing efforts to retire some of our C-130 Hercules and KC-135 Strato-tankers. Maintaining and acquiring sufficiently robust air and naval forces remain pressing requirements as these assets are central to ensuring the command of the sea and air that enables all operations. To help pay for these pressing requirements we must continue to look towards acquisition transformation that supports accelerated fielding of

equipment before the speed of technology eclipses its value. We also need to reduce stove-piped Information Technology service solutions and replace them wherever possible with joint enterprise solutions and capabilities that are more effective at reduced costs.

Our forces have relied upon the funds appropriated in the fiscal year 2009 budget request to accomplish equipment reset and to address readiness shortfalls. Congress's continued support is necessary for the predictable, adequate funding required for the repair and replacement of both operational and training equipment. I ask for your continued support for the upcoming fiscal year 2010 funding request. I fully support the vision Secretary Gates has laid out – and which the President has endorsed and forwarded – for the Department and the joint force. This vision and its program decisions emphasize our people first. Our advanced technology, superior weapons systems, and proven doctrine won't produce effective organizations absent quality men and women. These decisions also balance our efforts by addressing the fights we are in and most likely to encounter again without sacrificing conventional capability. That balance helps to check programs that have exceeded their original design, improve efficiency, and steward the resources taxpayers provide us for the common defense. The holistic changes we are making work in combination with one another and span the joint force. I am confident that they not only preserve our war fighting edge but also inject the flexibility required to address today's most relevant challenges.

An area of particular interest is energy – which is essential to military operations. Our in-theater fuel demand has the potential to constrain our operational flexibility and increase the vulnerability of our forces. Thus your Armed Forces continue to seek innovative ways to enhance operational effectiveness by reducing total force energy demands. We are also looking to improve energy security by institutionalizing energy considerations in our business processes, establishing energy efficiency and sustainability metrics, and increasing the availability of alternative sources.

The ongoing revitalization of the joint force makes our conventional deterrent more credible, which helps prevent future wars while winning the wars

we are now fighting. Restoring our forces is an investment in security – one which is hard in tough economic times – but one that is required in an exceedingly uncertain and complex security environment. Understanding that environment and having forces capable of the full range of military operations is central to balancing global strategic risk.

Balancing Global Strategic Risk

My third priority of balancing global strategic risk is aimed at the core functions of our military – to protect the homeland, deter conflict, and be prepared to defeat enemies. Each function is tied to today's conflicts and each requires continuous attention. Successful campaigns in Iraq and Afghanistan and improved partnership with Pakistan will take us far in the fight against al-Qaeda, although the network has spread tentacles across Asia, Africa, and Europe that we will continue to attack. These campaigns have two functions: first, deterring future conflict, and second, staying prepared by building networks of capable partners who help us see conflict brewing and are ready to stand with us if prevention fails. These functions help to protect and secure the global commons: sea, air, space, and cyberspace. Increasingly, we are encountering more security challenges to these nodes and networks of global commerce. In cyberspace, we are continuing proactive steps to pursue effective organizational constructs and to reshape attitudes, roles and responsibilities; we must increasingly see our information systems as war fighting tools equal in necessity to tanks, aircraft, ships, and other weapon systems. The nation must work to increase the security of all vital government and commercial internet domains and improve coordination between all U.S. Government agencies and appropriate private sectors. One related step in strengthening the military's operations in the commons that I continue to support is the United States' accession to the Law of the Sea Convention. This Convention provides a stable legal regime by reaffirming the sovereign immunity of our warships, preserving the right to conduct military activities in exclusive economic zones, ensuring unimpeded

transit passage through international straits, and providing a framework to counter excessive claims of other states.

We must be sized, shaped, and postured globally to detect, deter, and confront the threats of the future. At the same time we must leverage the opportunities for international cooperation while building the capacity of partners for stability. These capacity building efforts are investments, with small amounts of manpower and resources, which can, over time, reduce the need to commit U.S. forces. I recognize, as do the Combatant Commanders, that our ability to do so is constrained by ongoing operations, but that does not make building partner capacity any less important. We can magnify the peaceful effects we seek by helping emerging powers become constructive actors in the international system. Fostering closer international cooperation, particularly in today's distressed economic climate, is one method of preventing nations from turning inward or spiraling into conflict and disorder.

The wars we are fighting limit our capacity to respond to future contingencies and preclude robust global partnership building programs. While necessary, our focus on the current mission also offers potential adversaries, both state and non-state, incentives to act. We must not allow today's technological and organizational arrangements to impede our preparation for tomorrow's challenges, which include irregular, traditional and cyber warfare. In cyberspace, one often overlooked challenge is the need for military forces to maintain access to and freedom of action in this global domain. Our command and control and most sensitive information are constantly threatened by intrusion, interruption, and exploitation efforts. We must understand these risks in the context of the combined arms fight and carefully weigh their effects on our national security and global missions. This is true for the military as well as our nation's public and private sector cyberspace. In all, we continue to mitigate the risk we face in the ability to respond rapidly to other contingencies through a variety of measures. Restoring balance to our forces, however, remains the principal mitigation necessary for the long-term.

Enduring alliances and partnerships extend our reach. In each relationship we remain wedded to this Nation's principles which respect human rights and adhere to the rule of law. The 28 nation North Atlantic Treaty Organization, designed for a far different mission decades ago, has proven adaptive to the times and now leads the security and stability mission in Afghanistan. Australia, New Zealand, South Korea, and Japan have made key contributions to operations in Afghanistan and Iraq. India has emerged as an increasingly important strategic partner. We seek to mature this partnership and address common security challenges globally as well as within the region. Singapore, Indonesia, and the Philippines continue to work with us to counter international terrorist threats in Southeast Asia while Thailand remains a significant partner in supporting humanitarian assistance and disaster response in South and Southeast Asia. The Trans-Sahara Counterterrorism Partnership has worked to counter transnational terrorist threats in north and west Africa, and cooperative efforts with the Gulf of Guinea nations has generated improvements in maritime security against piracy, illegal trafficking, and overfishing off Africa's west coast. Multinational efforts in the Gulf of Aden are helping stem the unwanted scourge of piracy emanating from Somalia, though much work remains to be done. Colombia continues a successful counterinsurgency campaign in the Andean Ridge that reflects the patient, steady partnership between our nations, and we are particularly grateful for the Colombian Armed Forces' impressive rescue of three Americans held in FARC captivity last July. Military-to-military relationships with Mexico and Canada help to improve homeland security. In the coming year, in coordination with the Department of Homeland Security, we will work to improve cooperation with Mexico via training, resources, and intelligence sharing as Mexico takes on increased drug-related violence. The examples above represent far broader efforts and partially illuminate how enhancing teamwork with allies and partners helps to protect our shared interests. The interdependency of nations should not be allowed to unravel under economic duress, and these security focused programs are one way of reinforcing beneficial ties that bind.

We also seek to further cooperation with states not in our formal alliances. We have established relationships with the nations in the Caucasus and Central Asia to build a transportation network in support of our efforts in Afghanistan. We recognize the key role Russia plays and are encouraged by Russian assistance with this project. There is more we can do together to bring peace and security to the people of Afghanistan. At the same time, we are troubled by the Russian-Georgian conflict last August and while we acknowledge Russia's security concerns, its actions created a more difficult international situation and damaged its relationship with NATO and the United States. We look forward to resuming military-to-military engagement, as part of our broader relationship, in a manner that builds confidence, enhances transparency, and rights the path towards cooperation.

We likewise seek to continue improved relations with China, which is each year becoming a more important trading partner of the United States. We acknowledge the positive trends in our bilateral relations with China even as we maintain our capabilities to meet commitments in the region, given the security and stability that credible U.S. power has promoted in the western Pacific for over 60 years. We seek common understanding on issues of mutual concern but must recognize China's unmistakable and growing strength in technological, naval, and air capabilities, and this growth's effect on China's neighbors. While we are concerned over events such as the confrontation between USNS IMPECCABLE and Chinese vessels, we support China's growing role as a regional and global partner. I believe both governments can synchronize common interests in the Pacific. Key among these interests are continued joint efforts aimed at reducing the chance of conflict on the Korean peninsula and the return of North Korea to the Six Party Talks. This is particularly true given North Korean threats to restart its nuclear program and to continue testing an intercontinental ballistic missile in the face of United Nations Security Council Resolutions demanding that it halt nuclear tests or launch of ballistic missiles.

Rebalancing strategic risk also means addressing capability gaps. Our Nation's cyber vulnerabilities could have devastating ramifications to our national

security interests. Interruption of access to cyberspace, whether in the public or private sectors, has the potential to substantively damage national security. We cannot conduct effective military operations without freedom of action in cyberspace. Addressing this threat, the President's budget for fiscal year 2010 includes funds to reduce cyber vulnerabilities and to close some of the operational and policy seams between military, government, and commercial Internet domains. Likewise, and related to maintaining a secure global information grid, freedom of action in Space remains vital to our economic, civil, and military well being. We need to ensure access to cyberspace and Space as surely as we must have access to the sea and air lanes of the global commons. We must also address perennial shortfalls identified by the Combatant Commanders in Intelligence Surveillance and Reconnaissance sensors and processing infrastructure that are proving ever more crucial in missions that span the globe.

Fighting and winning wars will always be the military's most visible mission. Preventing wars through deterrence, however, is preferable. In our strategic deterrence mission, deterring nuclear threats is most crucial. Our nation remains engaged in many vital efforts to counter nuclear proliferation and reduce global stockpiles through international agreements and support activities. Still, many states and non-state actors have or actively seek these weapons. To preserve a credible deterrent we will need safe, secure, and reliable nuclear weapons, an effective infrastructure to sustain that enterprise, and skilled people to support it. In addition, as our strategic deterrence calculus expands to address new and varied threats, proven missile defense capabilities will remain essential as tools to deter, dissuade and assure in an environment of WMD and ballistic missile proliferation.

Persistent Engagement

Our vital national interests call for a wise, long-term investment in global persistent engagement. For military forces, persistent engagement requires

successfully conducting ongoing stability operations and building capacity with allies and partners. These efforts range from advising defense ministries to training host nation forces to conducting joint exercises to sharing intelligence to exchanging professional students. Over time, such actions help to provide the basic level of security from which economic development, representative political institutions, and diplomatic initiatives can take permanent root. Persistent engagement demonstrates enduring U.S. commitment, though, importantly, this commitment must be tempered with humility and a realistic assessment of the limits of our influence. The goal is always to empower partners, who are ultimately the only ones who can achieve lasting results.

During my travels, I've developed a more comprehensive appreciation of the value that personal relationships, fostered over time, bring to our security endeavors. At the senior level, these relationships provide insight and alert us to signals we might have otherwise missed, as such, providing us warning of conflict which can then be used to head off a brewing storm in some cases. These relationships should not be limited to just senior leaders. Rather, they should be developed throughout the careers of our officers and their partner nation colleagues. Such sustained cooperation builds a network of military-to-military contacts that ultimately provides avenues to defuse crises, assure access, institutionalize cooperation, and address common threats.

As I noted in particular with Pakistan, the criticality of "mil-to-mil" exchanges, combined exercises, schoolhouse visits, professional education collaboration, and many other programs are all part of the robust outreach we require. In particular, I ask that the Congress fully fund the Department of State's Foreign Military Financing (FMF) and International Military Education and Training (IMET) programs and Global Train and Equip Programs, which the Departments of State and Defense jointly manage. While many militaries around the world clamor to train with us, we reap far more than the costs of these programs in terms of personal, sustained relationships. These relationships help us bridge difficult political situations by tapping into trust developed over the course of years. I cannot overemphasize the importance of these programs. They

require only small amounts of funding and time for long term return on investment that broadly benefits the United States.

I endorse a similar approach for and with our interagency partners, and I fully support the building of a Civilian Response Corps. Achieving the objectives of any campaign requires increased emphasis not only on fully developing and resourcing the capacity of other U.S. agencies (State, USAID, Agriculture, Treasury, and Commerce and so forth), but also on increasing our Nation's ability to build similar interagency capacities with foreign partners.

Conclusion

In providing my best military advice over the past 18 months, one important point I have made, consonant with Secretary Gates, is that our military activities must support rather than lead our Nation's foreign policy. Our war fighting ability will never be in doubt. But we have learned from the past seven years of war that we serve this Nation best when we are part of a comprehensive, integrated approach that employs all elements of power to achieve the policy goals set by our civilian leaders. To this end, I believe we should fully fund the State Department as the lead agent of U.S. diplomacy and development, an action that would undoubtedly resonate globally. This approach obviously requires the backing of a robust military and a strong economy. As we win the wars we are fighting and restore the health of our Armed Forces, the military's approach will increasingly support our diplomatic counterparts through the persistent engagement required to build networks of capable partners. By operating globally, hand-in-hand with partners and integrated with the interagency and non-governmental organizations, we will more successfully protect the citizens of this Nation.

On behalf of our service members, I would like to thank Congress for the sustained investment in them and for your unwavering support in time of war.

PRESIDENTIAL HELICOPTER

Mr. MURTHA. Mr. Hale.

Mr. HALE. I don't have a prepared statement.

Mr. MURTHA. Well, let me tell the committee, we only have until 1,500, according to Admiral Mullen, 3 o'clock.

But—I am not going to ask any questions, but I just want to say about this Presidential helicopter, if it is true it is going to cost us \$555 million, which is 5,000 man-hours at \$100,000 a year, I think we have to relook at the first phase of that. And I hope we can work together in some form to come up with a helicopter to not only take care of the President, but to take care of that very vital need.

Mr. Obey.

Mr. OBEY. Mr. Chairman, I will pass.

Mr. MURTHA. Mr. Young.

MISSILE DEFENSE

Mr. YOUNG. On the Presidential helicopter, I have spent quite a bit of time reviewing the options, and I think there are some good options that should be available to the President and the President's party, and I am hopeful that we can work out something that will accommodate the needs and the financial requirements.

And Mr. Murtha and I have spent a lot of time talking with each other on this subject, and it is an important subject.

But I want to ask you today specifically about missile defense. And the reason I do is because of the latest firing of the longer-range missile by Iran and Ahmadinejad's continuing rhetoric about threats to our friends and allies in the region.

I note that the missile defense budget would be reduced somewhat, which I think maybe doesn't put us in as strong a case for the booster-phase launches, but that is something we will work on.

But I want to go to the issue of our radar sites and our interceptor sites in Europe, specifically in the Czech Republic and in Poland.

I understand now, based on some of the comments from the administration, that the parliaments of both countries are considering whether or not to proceed with the agreement that we thought we had, in view of maybe they have a question about what our intentions really are. So talk to us a little bit about the missile defense sites, the radar and the interceptors in Europe that would be very, very important not only to our friends and allies, but to American troops deployed in that region.

Secretary GATES. I would be happy to, Mr. Young.

We took the money out for the third site in the fiscal year 2010 budget because we have enough money left over for this purpose in the 2009 budget to be able to cover any potential costs, to go ahead and begin construction on both the radars and the interceptors, the radars in the Czech Republic and the interceptors in Poland.

As I am sure you know, the Czech Government that agreed to the radars has fallen, and they are going to have an election, I guess this summer or this fall.

They have to, under the statutes passed by the Congress—both the Czech Republic and Poland have to pass both a status of forces agreement and the agreements on the sites before any money can be sent on construction. And so, depending on how the Czech election comes out, we will see how that goes.

There is considerable interest, I would say, in the administration in pursuing the third site, but I would say also there is great interest—which, frankly, I have been working on for 2 years—to see if we can partner with the Russians and see if we can make this, in effect, a quadripartite effort of Poland, the Czech Republic, the Russians and ourselves. The reality is that the radar located in Russia supplementing those in the Czech Republic would give additional capability to the sites in Europe.

So we have the money, we need to see what the Czech Republic does in their elections. And I might add that, in parallel with the Quadrennial Defense Review, the Department of Defense is carrying out a Missile Defense Review that will address the role of the third site in the overall program.

So I think we have got the money and we just need to see how the politics in Eastern Europe go.

Mr. YOUNG. Mr. Secretary, I understand those issues, and I think that you are approaching them in the proper way.

In the statement by Ahmadinejad on their missile fire, he said it was a very successful flight and that it hit the target exactly as they intended. Can you comment whether that is accurate, whether there was a successful flight?

Secretary GATES. The information that I have read indicates that it was a successful flight test. The missile will have a range of approximately 2,000 to 2,500 kilometers. Because of some of the problems they have had with their engines, we think at least at this stage of the testing, it is probably closer to the lower end of that range.

Whether it hit the target that it was intended for, I have not seen any information on that. I don't know if the Admiral has any.

Admiral MULLEN. No, sir.

Mr. YOUNG. Thank you very much.

In view of our limited time available, a lot of questions on shipbuilding, aircraft production, tankers, a lot of important issues, but I know a lot of other members want to talk about those issues.

So, Mr. Chairman, I would yield back.

Mr. MURTHA. Mr. Dicks.

PRESIDENTIAL HELICOPTER

Mr. DICKS. Thank you, Mr. Chairman.

Mr. Secretary, good to see you again. Washington State is still out there, I want you to know.

Admiral, good to see you and Mr. Hale.

On the Presidential helicopter, you know, this decision, I hadn't been involved in this program and hadn't followed it, but the only question I have is, it appears that there was a certain amount of money that has been spent, around \$3 billion; and we developed a number of helicopters that didn't have the full capability that the final helicopters were going to have.

Is there any way to salvage those first four or five helicopters and use them for some purpose?

Secretary GATES. Those helicopters, if we completed them, first of all, they have a relatively limited life span—10 years, something like that. The current helicopters have a useful life span of about 30 to 40 years.

There is minimum capacity on the Increment 1 helicopters to add capabilities. So even if you bought those helicopters, you would almost immediately have to begin a new helicopter program to begin addressing the requirements that the White House has had, that were posited under the previous administration.

Now, I would just tell you that, first of all, those helicopters amortized would be about a billion dollars apiece. And I just—you have heard the President speak on this. The reality is, in some respects, those new Increment 1 helicopters have less capability than the current helicopter. With 10 passengers, the VH-71 has only 55 percent of the range of the VH-3, the existing helicopter.

Mr. MURTHA. Would the gentleman yield?

Mr. DICKS. I yield.

Mr. MURTHA. How could we get this far? How could we spend all this taxpayer money and now finally decide it has less capability than the other helicopter?

Secretary GATES. Well, the first increment of five or six were intended as an increment leading to the second increment, which would have all the new capabilities.

The second—to complete the program through the second increment, first of all, it is already 6 years overdue—but it would cost \$13 billion to finish it out.

So the first increment was never intended to have the capabilities and meet the full requirements that the second increment would. But the truth of the matter, Mr. Chairman, is that this program is a poster child for an acquisition process gone seriously wrong.

Mr. DICKS. So what do we do? Are we just going to use the existing helicopters?

Secretary GATES. No. First of all, we have programs under way to extend the life of the President's—the current Presidential helicopters. And the termination cost of the VH-71 plus the cost of additional life extension, which would actually take these helicopters for another decade or more, is \$1.2 billion. And our intent is immediately to sit down with the White House and look at the requirements and come up with a new program that will be reasonable and meet the requirements.

And I will tell you, one of the ideas that I heard this morning that I think is worth pursuing. What we may have tried to do in this VH-71 is put too many requirements, too high requirements on a single kind of aircraft in terms of protections and the number of passengers and so on and so forth.

So one idea is that you look at two different helicopters, that you look at one that the President basically uses here in town to go to Andrews and on regular trips here in the United States and things like that; and an escape helicopter that has different kinds of capabilities and that could perhaps be a modified kind of helicopter that we use now in combat.

So we are going to be looking at a lot of different ideas on how we can get this program back on track, get a Presidential helicopter program back into the budget, and get the President and his successors' helicopters within a reasonable period of time.

Mr. DICKS. Thank you, Mr. Chairman. We have limited time so I want to make sure everybody gets a chance.

Mr. MURTHA. Mr. Secretary, I lined up 13 people, two from the White House, telling them: Why does this cost this much? It is the White House that put these requirements on, from the former administration. They said, Well, we will push it over to the Obama administration.

But it is going to cost more than \$1.3 billion, you can be assured, because I have never seen an estimate yet that didn't cost a lot more. So I wish you would really look at the present money we have spent to see if we can't adapt something to that.

Mr. Lewis.

PAKISTAN COUNTERINSURGENCY FUND

Mr. LEWIS. Thank you, Mr. Chairman.

Admiral Mullen, you and I have communicated a bit about the priority that this committee feels relative to our challenges in Pakistan. Our initial communications suggested that the administration was on the right track, that is, they are asking for redirection of funding to Pakistan to help stabilize that government. The administration's direction, I thought, was appropriate.

The 2010 decisions made by this committee would take us off that course; that is, for 2010, they would have money to go into Pakistan handled through the State Department. I would like to have both the Secretary and Admiral Mullen give us the administration view on this for the record in this committee here.

Secretary GATES. The proposal that we have put forward for this, if you are speaking about the Pakistan Counterinsurgency Fund—which was \$400 million in the 2009 supplemental, and our request is for \$700 million in the 2010 budget—what we have proposed is that it be voted in the 2009 supplemental as a Department of Defense fund, but obviously with a dual key for the Secretary of State.

For 2010, the basic problem is that State lacks the authorities and the capacities to implement this program. So what we have suggested, because of concern in the House Foreign Affairs Committee and elsewhere, is that for fiscal year 2010, the money be directed to the State Department as a pass-through to the Department of Defense, but at least the money would come through the State Department. And our hope would be that it would come through without restriction, so we have maximum flexibility and agility, as we do when we implement these programs, and that it doesn't become subject to all the restrictions and so on of the Foreign Assistance Act and so on and so forth.

Then, in 2011, we would hope that during 2010, the Congress and the State Department could work together to make sure the State Department had the authorities and the capacity to implement this program; but the idea would be that beyond 2010 this program would be increasingly run through the State Department in partnership with us. And we still anticipate that a substantial part of the money would come to us just because of the nature of

the projects, but this would allow for the State Department to basically receive the money.

Mr. LEWIS. Admiral Mullen.

Admiral MULLEN. If I could just add, I think one of the most important parts of this, in a bridge strategy to get to that point, is speed of execution.

And I think, Mr. Obey, to your point earlier about both visibility and understanding the American people, we have in DOD mechanisms to put this money to work right away.

And, in Pakistan, there is, I believe, a requirement for patience on the part of us in dealing with them. And yet I know there are, in many places, strong feelings that we have got to get moving quickly.

So what we asked for, no, not what the Secretary laid out, is a strategy to be able to execute as quickly as possible on the ground, and the vast majority of this money is military money. And keeping that in mind is what makes me think that this strategy that Secretary Clinton and Secretary Gates had worked out is the right strategy.

Mr. LEWIS. But it occurs to me, as we go forward towards conference, following regular order, we are going to really want to have your help paying careful attention to the language that actually ends up being in conference regarding this matter.

I personally believe it is a defense matter, and State Department, as of this moment at least, doesn't have the capacity to follow through. So I appreciate your statement.

KEI TERMINATION

Moving to one other question, the kinetic energy interceptor, as you know, KEI, the program has been terminated in the fiscal year 2010 budget and the Missile Defense Agency is moving fast to shut it down. In fact, a stop-work order was issued on May 11, 2009, for the program. I am told that they will immediately begin the termination process, and the program will be destaffed by July 1.

In partnership with the Department of Defense, Congress has supported the requested budgets for KEI. In past years, Congress went beyond that and requested and provided the Department with additional dollars to accelerate this critical boost-phase capability. In total, the Department has expended more than \$1 billion towards this effort to date in providing the Nation with a technically viable solution to boost an ascent engagement of a ballistic missile targeted at our country or at our troops.

Six years of development and testing, with most of the more than \$1 billion in funding spent to date, was to culminate in the first booster flight of 2009, less than 5 months from now. With the issuance of the stop-work order, the Department is walking away from this development without the benefit of knowing what the technology has to offer.

Why would the Department kill the program 4 months before its booster flight? Why not allow the program to execute the fiscal year 2009 funds?

Secretary GATES. Actually, this is one decision that I can't take credit for. The Missile Defense Agency itself, last fall during the

Bush administration, essentially eliminated the kinetic energy interceptor from its fiscal year 2010 POM.

And the reasons for that are as follows: First of all, this was to have been a 5-year development program, and it now looks like it is about a 16-year development program. As you suggest, there has not been a single flight test. There are a couple more static tests, as I understand it, that have to take place before a test of the booster. There has been little work on the third stage or the kill vehicle, which are obviously critical.

But a big part of the problem with this program is that it needs to be close to the launch site to be able to be effective. And so the only potential country where it could have a role with some confidence would be North Korea. It has poor capability against Iran and virtually no capability against either Russia or Chinese launch facilities. And so you have a very limited capability here at considerable cost.

The other problem we have is that we don't know what to put it on. The missile is 38 or 39 feet long. It weighs 12 tons. There is no extant ship that we could put it on; we would have to design a new ship to put it on. And as I say, it would have to operate in close proximity to the territorial waters of these countries.

So for all these reasons, the decision has been made that this is not a productive way to look at the booster problem.

General Cartwright and I were here on the Hill this morning, talking to several Senators about this program; and the fact is, we have a very strong and very capable terminal phase missile defense. And it is getting better, and this budget devotes a lot of money to that program, to make it even more robust.

We have a strong ground-based interceptor program in Alaska and California, mid-course intercept program. And we are going to keep funding the development of that to keep improving that capability.

The boost phase is really the hardest, and that is because you either have to have an extremely powerful beam or you have to be fairly close to the source of the launch. And, frankly, the airborne laser is another example where the technology is lagging very far behind what were decisions to go ahead with an operational concept and a procurement program. On the boost phase, we got way out in front of our headlights in terms of going forward with a procurement program before we really had mastered the technology.

And so we have a number of programs. One of the reasons I am keeping the first, the prototype airborne laser, is to keep working the directed energy kind of solution to the boost-phase program. But overall, all these things considered, I think that is why the Missile Defense Agency made this decision actually last fall.

Mr. LEWIS. Mr. Secretary, the chairman has already expressed the reality that \$1 billion here, \$1 billion there, sometimes it gets very expensive. In this program area, we have seen the Department go in several directions over a reasonably short period of time and the taxpayers' moneys have been spent in the meantime.

So I would hope that you would recognize the committee does have some priority in this item and want to hear more from you.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Visclosky.

INDEPENDENT COST ESTIMATES

Mr. VISCLOSKY. Thank you, Mr. Chairman.

Gentlemen, thank you very much. And as Mr. Young indicated, I have a number of areas of concern that, as questions are answered for the record, I would be focused on. One is the Joint Strike Fighter alternative engine; the others are your shipbuilding programs.

But for this afternoon, I have two questions for you, Mr. Secretary. The first is on acquisition program costs.

Although the Department of Defense is required by law to conduct an independent cost estimate on major acquisition programs; these programs can be funded to lower confidence levels of the estimates, presumably to fit more program within a given year's request.

Recent examples of programs that have not been funded to full independent cost estimates include the DDG-1000 program, the Joint Strike Fighter, the Advanced Extremely High Frequency Satellite program, the CVN-21 aircraft carrier, the VH-71 helicopter that has been spoken about.

When the inevitable cost growth is realized, it creates ripples throughout the rest of the budget, and somewhere moneys have to be shifted to pay for the growth. Funding these major acquisition programs to their full cost estimates from their inception might, as the alternative, go a long way toward creating more stability in the budget.

In the manager's statement for the fiscal year 2009 bill, this committee asked for a report and the Department was forthcoming. The Department indicated that in 2004 only 13 of 29 major acquisition programs were funded to the independent cost estimate level.

My question is, do you not find the disruption caused by these faulty estimates—and there has been a protracted conversation this afternoon on one of those—to be much more severe than the constraints you would face if you had, hopefully, more accurate cost estimates going forward, even though they might be higher?

Secretary GATES. Let me respond, and then the Admiral, who probably has more direct experience with this sort of thing than I do.

I think this is really one of the focuses of the acquisition reform, both the bills here in the Congress and our efforts in the Department itself. And I think one of the innovations in the legislation that is moving is to get at the question of better cost estimates and more reliable cost estimates, along the lines that you are describing.

Admiral MULLEN. I have been on both ends of this problem, both—if you talk about the 13 or 24 programs, and I don't know what that list is right now. But I have seen programs that have been, I think, funded to the full estimate and, in fact, sometimes that becomes a self-fulfilling prophecy, because it was—because that estimate was out there, we figure out a way to spend that money. I have also seen programs that were underfunded, below the full cost estimate, in order to put pressure on them.

And so that is to say, for me, there is no magic bullet here about just getting the cost estimate right. I think it is the totality of the

acquisition approach that has got to be taken into effect, taken into consideration, which includes accurate cost estimates; holding people accountable, once we get to a point where we agree, this is what the cost should be; holding requirements down, which has a tendency to make cost estimates, whatever they are, whether they are underestimated or fully estimated, explode; and it speaks to the need of the entire requirements process, as well as getting at all of acquisition.

There are examples on every end of the spectrum here, but the need to get good cost estimates and properly assess risk in programs at the right time is absolutely critical.

Mr. HALE. May I add one thought to that.

I can assure you that we see that cost analysis improvement group numbers in the intended group you are referring to, in all the cases. So they do enter the debate and they are fully considered. And as the comptroller, I will continue to ensure that happens in the future.

NUCLEAR WEAPON STRATEGY

Mr. VISCLOSKY. Thank you.

My final question relates to my service on another subcommittee and that is the Energy Subcommittee along with Mr. Frelinghuysen. As you know, we have jurisdiction over the NNSA and the nuclear weapons program. That budget for the weapons program is about \$6.3 billion and obviously we have nonproliferation.

For fiscal year 2008 and fiscal year 2009, we have been adamant that before the Department of Energy, that does not have a stellar track record as far as managing major construction projects, goes down the road as far as reconfiguring the complex, we would want to have a strategy in place formulated by yourselves, the Intelligence Community, the Department of Energy, as far as the proposed use of nuclear weapons, conventional weapons, non-kinetic means to protect ourselves going forward, realizing that the world changes every day.

The point of that is, before we would provide moneys for the Department of Energy, we would want to know a strategy and then the types and numbers of nuclear weapons that fit the strategy you determine, which would then lead us to make sounder financial decisions for the Department of Energy.

The concern I have is Defense doesn't pay for that complex over at Energy, and I am just wondering where you are with that strategy. I know you have the Nuclear Posture Review coming, but I must tell you, Mr. Secretary, I am not just looking for that annual report, if you would, but some confidence before we start down that road with the Department of Energy that there is a sense of a strategy in the world we exist in today. And you have made some very difficult decisions on programs already at Defense—as to what are those weapons types, what are their numbers? Then we would be happy to proceed with Department of Energy.

Secretary GATES. Well, I think that, as you suggest, the key here in terms of the administration having an overall and longer-term strategy—

Mr. VISCLOSKY. And just parenthetically, not for the Obama administration any more than we asked for it for the Bush administration, but one that as a government we would proceed with.

Secretary GATES. I understand. And I think that the basis for an administration review of these policies and development of a strategy will be the Quadrennial Defense Review and the Nuclear Posture Review. These are being compressed in time because I want the conclusions available to be able to help shape the fiscal year 2011 budget.

So I am hoping that by the end of the summer or very early in the fall, we would have the information available, the analysis available to us not only to help shape a longer-range administration strategy in this area, but to inform the kind of decisions you are talking about.

Mr. VISCLOSKY. I appreciate that and would encourage you in that good work. The strategy is obviously important and critical for the Department of Energy. So I thank you very much.

Thank you, Mr. Chairman.

ACQUISITION PROGRAM COSTS

Mr. MURTHA. Mr. Secretary, I think it goes beyond even the cost estimates. LCS is a perfect example of that. The Navy said we could build it for \$188 million; it went way beyond it. I remember saying at the time, you will never build that ship for \$188 million. And there are all kinds of examples where the F-22 they said we are going to build 600 of them so that gets the cost down per unit.

I think we have to have the departments be more honest when they are putting forward these projections. And then industry counts on the requirements changing, and so they can up the price. I mean, it is not simple, but I think that is the complicated part of this problem.

Secretary GATES. It is, as Admiral Mullen said, a combination of several things; it is more realistic cost estimating, it is better control of the requirements anybody who ever added a room onto their house knows what happens when you change the specs. And that is what happens with these big weapons systems; people keep adding requirements and it keeps driving the cost up. We need better execution in the Department of Defense, and we need to negotiate better contracts.

Mr. MURTHA. Well, the taxpayer has to pay the bill, and that is our problem. And so we wish you well and we want to work with you in trying to get this thing under control.

Mr. Lewis was deeply involved in the F-22, and the Department fought him tooth and nail because he wanted to make sure that the research was done before we put the thing out there in the field for production. And we had one hell of a fight with the Senate and other people.

Mr. Frelinghuysen.

NEW AFGHANISTAN STRATEGY

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman. And gentleman, thank you for your service.

Now that the President has made his decision and outlined a new strategy for Afghanistan and directing more troops we need to

support those troops—I worry about the drumbeat that accompanied our efforts in Iraq, the drumbeat for 6 years that we should withdraw from Iraq; sort of the issue of timetables or benchmarks. I am afraid we are going to—and maybe this is what Chairman Obeys was alluding to—we are going to get the same sort of refrain in Afghanistan.

I would like to know where you think our involvement in Afghanistan is going. Obviously we are going to be supportive of our troops, the President's mission, but how is this going to turn out? And do we have the resources, do we have enough soldiers to do the job? And do they have the capacity, with enough equipment, to be successful in their mission?

Secretary GATES. This is one we should both take a crack at.

It actually was a view of mine, as we were putting together the Afghan/Pakistan strategy, that the administration needed to develop its own measures of effectiveness so that we could evaluate over a period of time whether we were actually making progress or not, and so we weren't rolling our goals in front of us and pretending we were making progress when maybe we weren't. So part of this process has been an interagency development of measures of effectiveness—benchmarks, whatever you want to call them—to see how we can measure progress.

My own view, sir, is that I think that there needs to be, on the part of the administration at least, an evaluation of where we are about next March or April, to see if we have begun to change the momentum in some respects, to see if we are making progress. And I think future decisions in terms of troops and things like that should depend on that.

I think that even if this goes well, it is a multiyear undertaking. The way we would see it evolving is, in many respects, the way it has evolved in Iraq, which is Iraqis increasingly taking more and more responsibility for security, and our taking a narrower and narrower view until finally we leave; and that the same thing would happen in Afghanistan, which is one of the reasons there is money in this budget for supporting the expansion of the Afghan Army.

I will tell you that I think our troops have the equipment that they need. In terms of the numbers of the troops, my experience on this is shaped very much by my experience in CIA and fighting the Soviets in Afghanistan in the 1980s, where the Soviets, with 110,000, 120,000 troops, didn't care about civilian casualties and they still lost. And so in a country like Afghanistan—I think each of these countries has to be taken one at a time in terms of what the traffic will bear and at what level of foreign troops do we become, instead of partners and allies, do we become seen as occupiers by the Afghan people?

So, personally, I am going to take some convincing in terms of going significantly beyond the troop levels the President has already approved. But I think that these troops are flowing in now. I think we will see them make a difference. And I am confident that they are going to do a great job.

Admiral.

Admiral MULLEN. I have confidence in the strategy. I think we need the benchmarks or the measures so that we can accurately as-

sess where we are and adjust. And doing that towards the end of this year and the first part of next year, I think is absolutely critical.

We do have enough people. I think the strategy is about right. It also offers, I think, great potential for success in terms of what we have learned in Iraq, rolling those lessons in, whether they are how to move through this, recognize it is not all about military, that we can't forfeit the security of the same people that we are trying to protect, and that we have got to have a development program and we have got to have a rule of law governance program that is delivering capability to the Afghan people.

I think we have got to work rapidly this year and next to stem the violence and to start to turn this around. And I think that is doable with the troops the President has supported so far.

AFGHANISTAN SUPPLY ROUTES

Mr. FRELINGHUYSEN. It is ironic that we are depending on the Russians for two supply routes, the other route being the Khyber Pass. The Russians lost in Afghanistan and have made life so difficult for us in Kyrgyzstan, that we would rely on the people who lost to Afghanistan earlier. And I hope that we have a greater degree of reliability because, obviously, to supply our troops, those overland routes are pretty vital to us.

Secretary GATES. And we have developed some alternatives to those as well.

I think one should not underestimate Russia's concern about Afghanistan being taken over again by the Taliban and being a refuge for violent extremists, and especially religious extremists. And also the Russians are seeing firsthand the consequences of the drug flow out of Afghanistan, and that is a big concern to them.

Mr. FRELINGHUYSEN. Thank you, both.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Moran.

BASE REALIGNMENT AND CLOSURE

Mr. MORAN. Thank you, Mr. Chairman.

All of the subject matter that has been addressed today is of great interest and importance.

I want to bring you back home a bit though, if I could, Mr. Secretary, to the BRAC decisions. I had voted against the 2005 BRAC realignment because I thought that the operational benefits were grossly overstated and the costs understated. And this budget shows that that turned out to be the case.

The cost to implement BRAC increased to over \$32 billion, up from the original estimate of about \$20 billion, and the savings decreased to only \$4 billion annually. The GAO calculates that the long-term savings for BRAC will save less than half of the \$36 billion that was originally estimated.

There are 230 locations scheduled to be completed only within the last 2 weeks of the statutory deadline. It is not going to happen, and yet we continue to budget under the assumption that it will. This includes—and this is why I am particularly sensitive to this—more than 6,000 Washington headquarters service employees who are to move to Alexandria—again they say it is going to be

completed in the last 2 weeks of 2011—8,500 employees to the new NGA facility at Fort Belvoir and the realignment at Walter Reed.

These decisions relocated 20,000 workers away from transit-accessible locations to sites where there is no public transportation. And as a result, the Army Corps of Engineers estimates that the traffic around these new facilities—primarily at the Fort Belvoir-395 Beltway area—is going to result in an extra 3 to 4 hours of delay in each direction when these employees are trying to get to work and leave work.

So, given the estimates that we now know are far more accurate than the rosy projections back 4 years ago, do you have any intent to reconsider the September 15, 2011 deadline? And I guess that goes to the Comptroller. My guess is you are going to buck that to the Comptroller, Mr. Secretary, so go ahead.

Mr. HALE. I think I will be glad to try this.

We are committed to BRAC. And I understand your concerns, but we feel we have fully funded it in a way that will allow us to meet the September 15, 2011 deadline.

Mr. MURTHA. Would the gentleman yield?

Are these figures accurate, in your estimation, of what Mr. Moran just explained?

Mr. HALE. Yes.

Mr. MURTHA. In other words, there is going to be very little savings and a big cost, and who pays it?

Mr. HALE. Well, when you say “very little savings,” we still believe it will be on the order of \$4 billion a year. That is our best estimate. And these are in perpetuity once they occur. So when you look at it on a net present value basis, Mr. Chairman and Mr. Moran, I think they will be more impressive than they appear now.

Mr. MORAN. Well, if I could suggest, Mr. Hale, the decision was made on the basis of information that proved to be wrong. And the \$4 billion savings is much less than we were told when we made the decision to go forward with BRAC.

Mr. MURTHA. If the gentleman would yield again, Bethesda alone, when I sat in the hearing, was \$200 million; it is already well over \$1 billion. How do we get these kind of estimates? How can you say you are going to reform acquisition and we can have these kinds of estimates from the Department?

Mr. MORAN. Of course it wasn't these guys, in all fairness, Mr. Chairman.

Mr. HALE. I was going to offer that defense.

Part of the growth is because we grew the force and increased it. But I think you are right, I know you are right; part of this is we did not estimate these clearly or well at the beginning. We used a rough model called the COBRA model, and it doesn't have a great deal of ongoing attention because we do BRAC so episodically. Right now, I think if we were going to do BRAC every year, we would be hard at work revising the model, and yet who knows when or if there will be another BRAC round. So I don't offer that as an excuse, but you are right, costs have gone up significantly.

I would just repeat my point. Once you start saving—let's say it is 2- or 3- or hopefully \$4 billion a year, you are going to save it forever unless you have to reverse the decisions. So it does start to add up. I think BRAC is one of the few areas where we really

have achieved some substantial long-term savings in the Department of Defense.

Mr. MORAN. In the Washington area, you didn't. And to create a 4-hour traffic jam every single day has even national security implications. You have got tens of thousands of people trying to get to Fort Belvoir, trying to get into work in Washington. And it is because you moved 20,000 people from Metro to a fort that has no public transit. It was a dumb decision to make. You didn't make it. But I don't think it would be responsible for you not to reconsider it.

Mr. HALE. We will certainly consider it. It is the law.

Mr. MORAN. I understand it is the law, but it is a law that was made because the Pentagon gave us estimates that turned out not to be accurate. And I am talking about one area where I know this was not a thoughtful decision. It can still be rectified, and that is what should happen. And I am going to tell you right now, we are going to be here next year and these numbers are going to be worse than they are today.

I have one other area, Mr. Chairman. Do we have time to do that?

Mr. MURTHA. No.

Mr. MORAN. We don't. Okay, that is fair.

Mr. MURTHA. Mr. Tiahrt.

SUSTAINING AFGHANISTAN

Mr. TIAHRT. Thank you, Mr. Chairman. And, gentlemen, thank you for your service to the country.

Mr. Secretary, in your budget the tanker program seems to keep lingering on; hopefully we will have a decision in 2010. You also shut down the C-17 production. And in light of the uncertainty of Russian influence, the instability in Pakistan, and the current situation in Iran, I think there may be a good argument that there is some risk that Afghanistan could become landlocked. And if that is the situation, how will we sustain our troops and how will we maintain the air bridge back and forth into Afghanistan?

Secretary GATES. Well, when we were contemplating the loss of Manas, we looked at a number of different options. First of all, I think the loss of all of the land lines simultaneously is probably not very likely. But we did look at a number of options, including a lot of flights from facilities in the Middle East, in Kuwait and elsewhere. And certainly the cost goes up fairly considerably, but it was deemed to be a manageable challenge.

AIRBORNE LASER PROGRAM

Mr. TIAHRT. But it is still something we have as a contingency plan. I am glad that you are planning on having some fallback position.

One other program that concerns me is in the airborne laser. If you look at the current situation in Iran with their most recent launch, with launches from North Korea, it seems that the greatest deterrent would be the ability to knock down an airplane in the initial phase of the launch and leave the debris in the country of origin. The airborne laser is the only tool we have that could do that.

And we have reduced the amount of funding, even though they are on schedule for a shutdown this coming fall.

So I am concerned that we are shortchanging this program that has a great need today and an even greater need in the future. And I would also like to note that, even though the F-35 hasn't completed its testing, we are moving forward into a production program.

So I am concerned that we are shortchanging the ABL program when we have such a huge need that is very apparent in current world events, and we are on track for completion of not only what has been proven in the lab and on the ground, now to be completed in the air.

Is there any consideration in how we are going to get this tool online more quickly when we have delayed the second aircraft purchase and shortchanged the program?

Secretary GATES. I don't know anybody at the Department of Defense, Mr. Tiahrt, who thinks that this program should or would ever be operationally deployed. The reality is that you would need a laser something like 20 to 30 times more powerful than the chemical laser in the plane right now to be able to get any distance from the launch site to fire.

So right now, the ABL would have to orbit inside the borders of Iran in order to be able to try and use its laser to shoot down that missile in the boost phase. And if you were to operationalize this, you would be looking at 10 to 20 747s at \$1.5 billion a piece and \$100 million a year to operate. And there is nobody in uniform that I know who believes that this is a workable concept.

I have kept the prototype because we do need to continue the research on directed energy and on lasers, and that will be robustly funded because we do need to continue developing a boost phase capability. But operationally this first test, for example, is going to be from a range of 85 miles.

Mr. TIAHRT. Well, thank you for the information. There are a series of comments I would like to leave you with.

In the competition for the tanker during the last go-around, we saw that there were some inequities in the request: there was no accounting for subsidies in the bidding process; there was no accounting for cost accounting standards; international traffic in arms regulations, and Foreign Corrupt Practices Act for our European allies. There was no accounting for the industrial base, there was no accounting for the lifecycle cost long term, as required by the FAR.

And as we go forward with this tanker procurement, I hope that we will take these things into consideration.

Thank you, Mr. Chairman.

Mr. MURTHA. Ms. Kaptur.

DEPENDING ON FOREIGN OIL

Ms. KAPTUR. Thank you, Mr. Chairman. And gentleman, thank you for your service to our country.

These questions can be answered very quickly. Admiral Mullen, how dependent is the United States economy and our military on foreign sources of oil and imported petroleum to meet our national economic needs and our military needs? Are we 5 percent depend-

ent, 20 percent dependent, 50 percent dependent or 80 percent dependent?

Admiral MULLEN. I don't know the exact number. I would say that from a national security perspective, we are proportionately as dependent as the United States is.

Ms. KAPTUR. I beg your pardon?

Admiral MULLEN. That the proportional dependence we have in terms of foreign oil in the Department of Defense and in the military is consistent with the proportion that we have as a country.

Ms. KAPTUR. Are you aware that we import about 80 percent of our oil?

Admiral MULLEN. Yes, I am.

Ms. KAPTUR. Well, that seems to be a serious vulnerability.

Let me ask you, how important are Iraq's oil fields in terms of global oil reserves; are they not important, are they somewhat important, or very important?

Admiral MULLEN. I think they are very important.

Ms. KAPTUR. Who is guarding our facilities in Iraq at this juncture, the U.S. military or through contractors?

Admiral MULLEN. Actually, I don't know the specific answer to that.

Ms. KAPTUR. All right. Is it possible that you or Secretary Gates know the answer to that?

Secretary GATES. I think that the Iraqis are guarding them.

Ms. KAPTUR. Through some type of contract, or directly through their security forces?

Secretary GATES. I think through their security forces, but we will get you an answer to that question.

Ms. KAPTUR. And if there are private firms involved somehow in the guarding of those facilities, could you provide that for the record, sir?

Secretary GATES. Sure.

[The information follows:]

Our facilities in Iraq are guarded by both service members and contractors, working in concert to provide unparalleled levels of safety and protection for those in harms way. There are currently 27 Private Security Contractors (PSCs) consisting of approximately 11,500 armed/unarmed U.S. citizens, third-country nationals, and host-nation personnel assisting U.S. Forces in excess of 130,000 providing security to our facilities in Iraq. PSCs augment the security provided by U.S. Forces through static security and dynamic security) Convoy operations, personal security details.)

Examples of "static security" include guards situated "outside the gate" manning checkpoints and guard towers, ensuring only authorized personnel have access to our bases. Additionally, guards are utilized at key locations on our bases to ensure only authorized personnel are accessing our facilities. In terms of dynamic security, PSCs provide an additional layer of protection already being provided by U.S. Forces (in terms of manning and armament) by assisting in defending high-value assets and personnel traveling within theater.

CONTRACTORS IN IRAQ

Ms. KAPTUR. Secretary Gates or Admiral Mullen, what is the actual number of contracted personnel that the U.S. military anticipates will remain in Iraq this year and next year?

Secretary GATES. The high number was in the 160,000s. We expect them to be down to about 138,000 by the end of this year, and about 90,000 at the end of 2010.

Ms. KAPTUR. And could you provide for the record as well, in terms of security forces, what happens to those as those numbers come down?

Secretary GATES. Yes, ma'am.
[The information follows:]

Private security contractors (PSCs) perform a variety of security functions to include: personal security, convoy security and static security missions. Current trend data indicates a three month lag between troop reductions and a corresponding decrease in the number of contractors. PSC data represents an anomaly to that trend. In the short term, I expect the number of PSCs in theater to increase slightly for two reasons: First, as our forces decrease, the security functions they performed will be absorbed by PSCs, and secondly, although our forces are being reduced, the number of facilities initially will remain unchanged. In the long run, as troop departures normalize and the military facilities close, I'd expect a decrease in the total number of PSCs.

Ms. KAPTUR. Are you removing cooks or are you removing contract security forces?

Secretary GATES. I think it is across the board, but we will get it for you.

CONFLICT IN AFGHANISTAN

Ms. KAPTUR. I thank you very much. In Afghanistan, the bulk of the Taliban are Pashtun. Are we fighting the Pashtun, Secretary Gates?

Secretary GATES. I think we are fighting several different enemies. The Taliban are clearly the principal force in Afghanistan, but you also have the Haqqani network. You have a variety of different groups, including Pakistani insurgents, al Qaeda, foreign fighters, and so on.

Ms. KAPTUR. Are they under a central command and control structure?

Secretary GATES. I would say loosely.

Ms. KAPTUR. Who is the commander?

Secretary GATES. Well, Mullah Omar still is alive. And to the extent that anyone oversees the whole operation, that would be him.

Ms. KAPTUR. Is Bin Laden an objective of the war?

Secretary GATES. Yes, but I would say secondary.

Ms. KAPTUR. What is the platform of the moderate Taliban, and is it something we can live with?

Secretary GATES. Well, I think we have to figure out who the moderate Taliban are first. Right now, in terms of potential reconciliation, I think that the odds are against us. I think that as long as the Taliban think that they have the upper hand, it is going to be difficult to get them to reconcile, at least on the terms that are acceptable to the Afghan Government.

We do believe that a significant number of the Taliban fighters are doing it mainly for money. And so if we can help Afghanistan rehabilitate their agriculture and find jobs for these people, you could get a number of those people who are doing it just for money to walk away from that movement. But there will be a certain hard core that will be totally irreconcilable.

Ms. KAPTUR. How will we know when we have won in Afghanistan?

Secretary GATES. When our troops are out.

Ms. KAPTUR. After they have achieved what?

Secretary GATES. After they have achieved a situation in which the Afghan Security Forces, with international help, are able to maintain the security of their own country against both the Taliban and any external threats.

ALLIED SUPPORT

Ms. KAPTUR. Finally, let me ask Admiral Mullen, for the record, in your testimony at several points you inject the word “partner”—page 2, page 4, page 6—“networks of partners and allies, expanding the sets of partnerships.” Could you, for the record, clarify what you mean by “partnerships” as opposed to “allied support?”

Admiral MULLEN. I would say that in many ways they overlap. It would depend specifically on the relationship we had with a given country. I think both of them are critical in the world we are living in now and the world we are going to be living in the future.

Ms. KAPTUR. Is it possible for you to provide for the record what you mean by—a partnership is not a country?

Admiral MULLEN. Say that again.

Ms. KAPTUR. A partnership is, then, not a country?

Admiral MULLEN. A partnership with a country is exactly what I mean.

Ms. KAPTUR. Then why on page 6 would you say “steadily expanding the sets of partnerships as opposed to allied engagements available to address future challenges.” On page 2, page 4, page 5, page 6, this word “partnerships” keeps cropping up. I don’t understand what that means. Could you clarify that for the record and explain how that is distinct from allied support?

Admiral MULLEN. Yes, ma’am.

[The information follows:]

“All alliances are partnerships of some sort. But not all partnerships are alliances.

In today’s dynamic security environment, where threats arise not only from nation-states, but also from loosely-knit networks of malcontents and extremists, where natural disasters and international crimes alike demand the occasional use of military power—we can no longer afford to organize that power solely within the confines of traditional alliances.

Alliances still have their place, to be sure. NATO, for all the criticism it has received in recent years, has without question transformed itself into a much more expeditionary force. Some 59,000 service members from 41 nations, all 28 NATO nations and 14 NATO partner nations are supporting the mission in Afghanistan. ISAF forces are conducting security and stability operations, providing senior leadership in all five regional commands, and are directly involved in the mentoring, training and equipping of the Afghan National Army.

But we cannot rely solely on allied support to succeed in places like Afghanistan and Iraq. We need flexible partnerships outside these more formal relationships. Consider Afghanistan. After nearly two years as Chairman, it is clear to me that we must make the Afghan people our center of gravity—providing them the security they need to beat back the Taliban and the stability they need to prosper.

Allied military might will only get us so far. We need Pakistan—which is not an official ally—to partner with us against safe havens on their side of the border. We need civilian expertise from the State Department and other federal departments to assist in developing good governance all the way down to the district level. And we need the support of non-governmental agencies and charitable organizations to alleviate shortages of foodstuffs and promote education and development. In short, we need partnerships that don’t always come in the tidy packages of alliances.

Nobody can do it alone anymore, not even the best of alliances.”

Ms. KAPTUR. Thank you very much.

Thank you, Mr. Chairman.

Mr. MURTHA. Mr. Kingston.

BASE REALIGNMENT AND CLOSURE

Mr. KINGSTON. Mr. Secretary, in April you announced that there would be 45 brigade combat teams and not 48. I have the honor of representing Fort Stewart, Georgia in Hinesville, and of course they have a lot of pride. Under BRAC, they were going to get another brigade. It is a community that, as you know, does everything they can to support the post, as does Savannah with the Hunter part of it.

Fort Stewart is a four-time winner of the Community of Excellence Awards. And the community, after the BRAC announcement, has been spending lots of money in preparation for a new brigade—hotels and new roads and putting investment on the post itself. Actually, millions of dollars have been spent on it. But now everything is a little bit on hold, up in the air. Banks won't lend money anymore; the community is not sure if this is going to happen or not, definitely, maybe, not another brigade, or maybe more troops will come back, filling the existing brigades. Developers and investors are now back on the sideline. And so there is a lot of angst down there.

I was wondering if you could comment, what kind of direction can we give the folks there, both the people in uniform and then the civilians who support the post?

Secretary GATES. Well, as you know better than I do, there were some significant additional units that were deployed to Fort Stewart last fall. And with respect to where the additional Army brigade combat teams will go, my understanding as of this morning is that the Army has not yet made that decision.

But the one thing that I would explain or hope to make clear is that one of the reasons we are doing this is that, had the Army gone to 48 brigade combat teams, they were doing so with the same number of people that they had, regardless. And so you would have had a thinning out in the brigades, and it would have hindered our effort to get rid of stop loss. So this is to make these brigades more robust, so they are more fully staffed, manned, if you will; and so these units will all be filled in, if you will, in a way that we have not seen, at least in the last few years.

But in terms of an additional full brigade moving in there, the Army just hasn't made that decision yet.

Mr. KINGSTON. Well, the community does share your vision in the caring for our troops—

Secretary GATES. Yes, they do.

Mr. KINGSTON. They are 100 percent behind you on that, and also the stop loss and getting everybody up to full strength. So that is very important.

When do you think the Army will make that decision?

Secretary GATES. I just don't know. We can try and get something for the record for you.

[The information follows:]

On June 2, 2009, the Secretary of the Army announced that in accordance with the President's budget, the Army has halted the plan to build three additional brigade combat teams (BCTs) at Fort Bliss, Texas, Fort Carson, Colorado, and Fort Stewart, Georgia. This decision will not affect the Army's authorized end strength of 547,400. The army will reach its target of 45 BCTs in FY10 with the activation of the 2nd Brigade, 1st Armored Division at Fort Bliss.

With this announced change, the population at Fort Bliss is projected to grow from 13,742 in 2003 to 36,069 in 2013; Fort Carson from 15,199 to 25,033; and at Fort Stewart from 20,512 to 24,970.

This announcement does not involve the restationing of two Heavy BCTs scheduled to return from Europe in FY12 and FY13, which is being examined as part of the ongoing Quadrennial Defense review. White Sands Missile Range, New Mexico will no longer receive a BCT from Europe in FY13 as originally planned.

Halting the three additional BCTs ensures that the Army retains its ability to support future requirements and maximizes:

- The ability of brigades to deploy for contingency operations and major exercises;
- Opportunities and access to training facilities, Battle Command Centers, and Training Support Centers to provide ready units to meet Army Campaign Plan missions; and
- Quality of life for Soldiers and Families.

Additionally, this plan allows for the best use of existing funding and current and planned FY09 and FY10 military construction projects. These projects play an essential role in supporting the Army's growth to 547,400 and ensuring Army Soldiers and Families have the quality facilities they deserve.

This announcement allows Congress to make time-sensitive and important authorization and appropriations decisions. The Army will provide Congress shortly a detailed, project-by-project list that specifies which facility requirements have changed and which remain valid.

The Army understands the tough economic impact this decision will have on the communities that have worked so hard to prepare for the arrival of the three brigades. They are great partners with the Army, and we will need their continued support as we work together on the growth that is underway at those locations.

Mr. KINGSTON. And we actually do have a delegation letter outlining this in more specifics that is going to be coming to you Friday. We have given you an advance copy of that right now. But we are totally in support of your vision and Fort Stewart and the soldiers, but it is very difficult when the banks that were starting to lend money—during these economic times it was important that here was a bright spot, and now all of that is sidelined again.

Mr. MURTHA. Excuse me, just a minute, Mr. Kingston. I am going to go vote. Mr. Dicks is going to take over.

I am impressed, Mr. Secretary, you have been deeply involved in this budget. You answered the questions, you know what the hell is going on. That is interesting for a Secretary.

Mr. DICKS [presiding]. Very unusual.

IMPROVISED EXPLOSIVE DEVICES

Mr. KINGSTON. Mr. Secretary, on another subject, I want to make a comment that when Americans think about IEDs, and I think Members of Congress, we think about Iraq and don't realize that there will be, and there already is, an uptick of IED incidents in Afghanistan, but that IEDs are not going to be isolated to those two countries. They are already around in other nations and people are more familiar with them. But IEDs could start taking place on domestic soil.

Your budget has a lot for IED research and training. But I just want to say that I think a lot of us would certainly support IED continued research beyond 2010. And regardless of what happens in Afghanistan, I think we want to support your commitment to the IED Task Force.

Secretary GATES. Mr. Kingston, I think that this is a program we have now moved from the supplemental into the base budget, so that it will be a sustained effort over an extended period of time; because I share your view that the IED, unfortunately, is a very cheap weapon that is very effective. And I worry a lot that, as you

just said, that Afghanistan and Iraq are not the only two countries where we will see this.

Mr. KINGSTON. I thank the gentleman.

FUTURE COMBAT SYSTEMS

Mr. DICKS. Mr. Secretary, tell us, you have restructured the Army's Future Combat System. Can you tell us about that?

Secretary GATES. Sure. We are going forward with the first increment of the Future Combat System, which has the UAVs, unmanned ground vehicles, sensors, and the networking. And instead of limiting it to 15 FCS brigade combat teams, we are going to expand it to all 73 brigade combat teams of the Army. So all of this networking technology that has been developed and spun off will all be filtered into the entire Army.

The part of the Future Combat System where I said we need to start over is the vehicle part. And there are a couple of reasons for that. One is, we were applying a lot of Band-Aids trying to figure out what this system was going to look like, because we were having trouble absorbing the lessons of war.

So this program, which began 9 years ago, for example, began with an 18.5-ton vehicle, so it would fit into a C-130. Then in 2006 the weight went to 26 tons. In 2007, it went to 27 tons. It has now gone to 30 tons, and is probably headed toward 35 tons. So we were putting Band-Aids on as people were trying to figure out how to accommodate these vehicles to the lessons of war.

For example, they identified a couple of years ago that the Infantry Fighting Vehicle had a flat bottom and was going to be 18 inches off the ground, so it contained none of the defenses against IEDs that we have just been talking about.

Because MRAPs didn't exist when the program was first initiated, the program had no place in it for the \$26 billion the taxpayers have invested in the MRAPs and for our role there. And frankly, we did not negotiate a very good contract. All eight vehicles were allocated to two builders, so there was no competition for the vehicles. We were paying a third party a pass-through fee to acquire the vehicles for us, instead of the way we bought the MRAPs, which was directly with the manufacturers. And 90 percent of industry's performance fee was guaranteed at critical design review, leaving very little incentive when it came to building the prototypes or final testing.

So for all those reasons, we have restructured the program. I have told the Army and I have told the authorizing committees, an Army vehicle modernization program is a very high priority, and I believe—the latest I heard just this morning or yesterday was that as early as this fall the Army may have an alternative proposal coming forward in terms of these vehicles. So I think little, relatively little, time will be lost, but in a program that will potentially cost \$150 billion, it seemed to me important to get it right.

PAKISTAN

Mr. DICKS. In Pakistan, there has been a lot of discussion about trying to get—and Admiral Mullen, I know you have been there many times—trying to get the Pakistanis to focus more on the in-

surge and the Taliban and less on their concerns about India. Are we making any progress on that direction?

Admiral MULLEN. Yes, sir, I think we are. In fact, I will cite two examples: the level of activity in the last couple of weeks in Bunair, Indirh, and now Swat. And it has been a sustained level of activity. Clearly there is a history in Swat and it is a big challenge. So part of the future assessment and judgment is, are they going to be able to sustain it and have an impact, and can they in fact in classic counterinsurgency hold the territory that they cleared the insurgents from. And we are in that phase right now in some places. And we just don't know because it hasn't been long enough.

Secondly, when I was there about 3 or 4 weeks ago, General Kiani, who is the Chief of Staff of the Army, took me out in the field with two of his divisions who were doing counterinsurgency training, training that he has put in place over the last 12 to 18 months for his entire Army. These two battalions that I was observing were actually battalions preparing to go to the West and spend upwards of 1 or 2 years up in the West. And when I say they were doing training, they built the training ranges, they have looked at best practices here and other countries to build these training ranges, done it very rapidly, so they are starting to move in that direction.

All of that said, it is my view that they are not going to lose the focus on India. And they have got a challenge of literally two fights: a conventional challenge and threat, along with a counterinsurgency challenge, which they increasingly recognize. It is just going to take some time, and our patience level with them is key to establishing the long-term relationship with them to, one, counter this threat, and two, to have a relationship with them in that part of the world, which I think is absolutely critical.

ROLE OF THE STATE DEPARTMENT

Mr. DICKS. Let me ask you this. We had this debate. I actually was at the White House several times when Secretary Rumsfeld and Secretary Rice would clash over the role the State Department wasn't playing in Iraq. And you talked about this a little bit earlier. But do you think there needs to be legislation to give more authority to the Secretary of State to get her people into the field? At that time they were saying they only could stay for 75 days or 90 days, some very short period of time. And I believe it is true you can't win this thing militarily, you have got to help this economy change, we have got to get rid of these drugs, and we have to develop their agricultural capability. What do you think about that?

Secretary GATES. I think mainly what the Secretary of State needs is resources. She does need some authorities that give her more flexibility. For example, she needs to be able to provide the kind of benefits and pay to people in combat situations, combat zones, that we pay to the military.

She makes the point that, and I won't get the numbers right, but I am going to be in the right ball park—and maybe you remember it—but there is a significantly higher percentage of civilians who have been killed in Iraq and Afghanistan than military, given the number of people who were there. And so she does need the authorities to be able to be more flexible in paying these people in

terms of providing benefits and family care, like we have, and so on. But above all, she needs more people and more dollars.

Mr. DICKS. Thank you.

Mr. MURTHA. Ms. Granger.

COUNTER DRUG EFFORTS

Ms. GRANGER. Thank you.

Chairman Mullen, I have two questions for you, please. The first question has to do with the Merida Initiative. And we have worked closely together to ensure that the key equipment was delivered to Mexico as part of that initiative. I was disappointed to discover how our bureaucracy led to some significant delays in delivering the equipment that was essential to President Calderon as he fights these drug cartels, and I thank you for your efforts to get this process back on track.

My question first is, are you aware of steps we are taking to make sure that doesn't happen again and to make our bureaucracy more efficient and prevent similar situations from arising in the future?

Admiral MULLEN. Ma'am, in my recent visit there is when I really got exposed to the delays. Merida, this was its first year. In fact the money, which was 2008 money, didn't start flowing until December. And this is something they don't understand and is not unique to Mexico, I see it all over the world—you said you would do this, can we start moving this pretty quickly? And our bureaucracy can be pretty cumbersome at times.

The areas I was focused on specifically were helicopters, which they need. And then when I pulled the string on it, in fact there were discussions about we were going to give you five, and now it looks like three. And putting pressure, at least looking into it, it looks like they are going to get the five helicopters late this year—at least that is the last input that I had—and some other equipment that they need to fight these cartels.

And as many have said, there is dual responsibility here. This isn't just a problem in Mexico, because clearly it has been supported by money, supported by weapons here. It had a big impact, obviously, particularly in the border states, although not exclusively within our own country.

We are into our FMS system, which can be very cumbersome, and take a lot of time. The Secretary has actually asked the Department to go look at ways now to make this much more flexible because of the world that we are living in. And it was originally designed to be slow. The law sort of set in place was we don't want this system to move very quickly.

But when I have needs like Mexico—and I can talk about Afghanistan and Iraq and Pakistan—we need to move stuff through much more quickly than we have.

Secretary GATES. What I have tried to do in this review—and I have told the President about it, because it really does hinder our ability to help other countries who are our allies and partners in these fights. And so the study really has two pieces to it: What is it in the Pentagon bureaucracy and the executive branch bureaucracy that slows this stuff down, and what is there in the law that

slows it down? And when we get the answers to those questions, we are going to get your help to try and fix this thing.

PAKISTAN COUNTERINSURGENCY CAPABILITY FUND

Ms. GRANGER. My second question has to do with the Pakistan counterinsurgency capability fund. We have talked about that already today.

Your staff, Admiral Mullen, have been very helpful in helping me understand the details of that, and why it is so critical to our warfighting component. And we agree that the situation and the strategy demand enhanced capacity from the State Department as well.

Help me understand the military component to the PCCF that may endure after we increase state capacity.

Admiral MULLEN. Actually, for the PCCF, the vast majority of the money is focused on the military. It gets at training capabilities for the Pakistani military; it gets at requirements like helicopter requirements; not just the helicopters themselves, but the Pakistani military, aviation side, has a very, very difficult maintenance challenge, and so supporting that as well. The kinds of intelligence, surveillance and reconnaissance capabilities, night vision goggles, training facilities, all of which focuses on counterinsurgency, and the vast majority which will be enduring, I believe, in their country for a significant period of time. And it breaks down across those various kinds of capabilities. And there is not an insignificant amount that also goes to the State Department to support the kind of developmental needs that also must go hand and glove with the military requirements.

Ms. GRANGER. I happen to sit on State Foreign Operations and Defense. But we will continue to look at that. And make sure that you continue to keep us apprised of that joint capability and necessity.

Thank you very much.

MILITARY UNIFORMS

Mr. MURTHA. Admiral, a lot of older guys like me see in the Pentagon people running around in jumpsuits, running around in utility uniforms. Do we not have enough money for Class A uniforms?

Admiral MULLEN. Yes, sir, we have money for Class A uniforms.

Mr. MURTHA. I remember the day when we were constrained from even leaving the base wearing a uniform; you had to wear a uniform. You didn't wear the field uniform; field uniforms are for the field. Are we going to get back to that?

Admiral MULLEN. Well, we went to this a few years ago—as I know you know, Mr. Chairman—because we are at war. And that was really the intent of the change. I can't remember exactly when it happened, I was in the Pentagon at the time. There is no guidance right now to reverse that, although I share your concern that some of these uniforms aren't necessarily the right uniforms for the workplace in every kind of situation.

SUPPLEMENTAL FUNDING

Mr. MURTHA. Well, I appreciate the endorsement of the White House for our version of the supplemental. I hope the Senate agrees with the amount, because we are going to be constrained—I figure we are going to get a lot less money in the allocation for our 2010 bill. And so I would hope that we can convince the Senate that they need to at least look at the possibility of going a little higher in their estimate than where they are right now. And I have talked to Senator Inouye; I know he is constrained by a lot of other things.

But Mr. Secretary, do you have all the tools you need? Mr. Obey keeps talking about the tools you need in order to fight this war. Do you have all those tools in place? I heard the first briefing and I liked the briefing, I think you are going in the right direction. I think you have the right idea. You are going to train the Afghans, you are going to put State Department to work—I mean, you are not going to, but the President is. Have you got the tools? Is there anything we need to do?

I know you are constraining the other services coming to us, and I agree with that. We told you a couple years ago we would try to work through the Comptroller, and we appreciate that. But is there anything you need that we are not doing that should be included in the supplemental?

Secretary GATES. I don't think so, Mr. Chairman. One of the projects we are working on right now is an interim solution for MRAPs in Afghanistan to give them more off-road capability. And until we can get a new vehicle over there—the request for which is in the budget, the MRAP all-terrain vehicle—we are looking at a program that is working for the Marines, which is changing out the suspension on the Cougars. It costs about one-tenth as much as a new vehicle and gives you about 80 percent of the capability. And we are looking at how we can accelerate that over the period of the next months to provide more protection for the troops until we can get this ATV.

But on the whole, the truth is you all have been very generous to us. Like when I came up here 18 months ago, 2 years ago, and asked for the money for the MRAPs, you all just stepped right up to the plate.

Mr. HALE. Mr. Chairman, could I mention one issue with regard to the supplemental I think you are aware of? We have a significant shortfall of military personnel funding in fiscal 2009. Before your actions, it started at about \$2.5 billion associated with the services being over strength, partly because the recruiting environment was good. They were trying to cut back on stop loss for a variety of reasons. That is about half of it; the other half higher than expected in the budget for a pay raise. There were a lot of other reasons. You were very helpful and solved more than half of that, but we are still about \$1.1 billion short this fiscal year in military personnel.

Mr. MURTHA. Wait a minute. We put \$2.5 billion in.

Mr. HALE. Well, there were also some cuts that you made in military personnel, principally in bonuses, so the net effect still left us short.

Mr. MURTHA. You are not talking about the bonuses.

Mr. HALE. The committee made some cuts, primarily in bonus payments in various accounts.

Mr. MURTHA. With the environment you have, I mean, bonuses have never been one of my favorite subjects, and when you get on that subject I get worried. I mean, we still have to have bonuses?

Mr. HALE. Well, actually, some of the cuts there actually went to even the anniversary payments for past bonuses. And in some cases the cuts are below what we have already obligated for this year. I understand your general point—

Mr. MURTHA. We will work with your guys and we will try to work that out. We have some other people who haven't asked any questions, so I am going to let them ask questions.

Mr. Rothman.

NUCLEAR PROLIFERATION

Mr. ROTHMAN. Thank you, Mr. Chairman, Mr. Secretary, Admiral Mullen, Mr. Hale. Thank you for being here.

President Obama reiterated on Monday that if Iran were to acquire nuclear weapons capability, it would be a grave threat to the region, including our number one ally in the region, the State of Israel, but also many Arab nations in the region. It probably would start a nuclear arms race in the region. Such weapons capability would threaten our allies in Europe, and would also threaten the national security interests of the United States of America.

I am glad to see that the President will begin new diplomatic conversations with Iran, directly or indirectly, in the coming weeks or months, and has said he will give it to the end of the year to reassess how Iran is doing with regards to reversing its position on acquiring nuclear weapons capability.

But we are in the business, on this subcommittee, of contingency planning. And if, as the President and others have described, a nuclear weapons-capable Iran are accurate—and I believe they are—and that it would be an unacceptable threat to U.S. national security, do you feel, Mr. Secretary, that this present budget and our present military capabilities can fully accommodate a worst-case scenario where Iran would not step down from its efforts to acquire a nuclear weapon and military action was necessary?

Secretary GATES. Let me just say in open session here that I believe we have the resources in the proposed budget that would allow us to deal with all possible contingencies.

Admiral MULLEN. I agree with that.

Mr. ROTHMAN. Thank you, gentleman.

The other issue—and I know others wanted a chance to ask questions as well, so I will limit myself to one other additional question regarding nuclear weapons now in possession of Pakistan.

It has been discussed that one threat to U.S. national security and the region's security in and around Pakistan would be if, God forbid, the terrorists and those designed on the death of Americans and innocents were to get hold of Pakistan's nuclear weapons, are you confident that our present capability and the resources you are asking for in the 2010 fiscal year Defense budget are adequate to guarantee that those nuclear weapons possessed by Pakistan are secure and will be safe from interception by terrorists?

Admiral MULLEN. I am comfortable that the security measures the Pakistani military, in particular, is taking ensures their security. We, the United States, have invested in improving their security program over the last 3 or 4 years—that is not done through the Department of Defense, it is done through the Department of Energy—and that they have improved dramatically.

That said, it is a sovereign country, a very sovereign program, very well protected from a proprietary standpoint by the Pakistani people, the Pakistani Government. And there are limits to what our knowledge is. They certainly are aware of the concerns. And at the top of my list for threats right now globally would be terrorists getting ahold of nuclear weapons. And I have certainly expressed that concern both publicly here and privately to the leadership in Pakistan.

Mr. ROTHMAN. And beyond the sovereign issues and your expressions of concern—again, we deal in worst-case scenarios—in open session, can you comment on our capability to address the worst-case scenarios?

Admiral MULLEN. I wouldn't comment on that in open session.

Mr. ROTHMAN. Thank you.

Mr. MURTHA. Mr. Rogers.

AFGHANISTAN STRATEGY

Mr. ROGERS. Thank you, Mr. Chairman.

Welcome. Mr. Secretary, in the recent change of our leadership in Afghanistan, you cited the need for “a fresh approach in Afghanistan.” Tell us what you mean by that.

Secretary GATES. Well, first of all, I wanted to follow the model that we followed as we implemented the surge in Iraq which was, when the President decided to implement the surge in Iraq, he moved forward—by not much, but some—a change of commander in Iraq. And General Petraeus took General Casey's place. So General Petraeus was able to manage that strategy from the moment it began to be implemented, through significant success.

I was very concerned about changing commanders midway through a few months, or 7 or 8 months into this strategy and having somebody brand new come in, in effect, in the middle of the stream. And so one of the considerations for me was having a commander who was there from the beginning of the implementation of this new strategy.

I also think that with the new forces coming in, I think that with the 68,000 troops that the President has approved—and I go back to my comments earlier about my concern about a significantly higher number of troops in Afghanistan—I wanted fresh eyes in terms of are we using the troops that we have there in the most effective possible way, and are there other ways in which we can make better use of them?

I think another piece of this is the fact that we are sending a team in. Both General Rodriguez and General McChrystal have a broad range of experience, not just counterinsurgency. And General Rodriguez, when he was the commander in Regional Command East, was very successful when he was commander of the 82nd Airborne there. And so it is this combination of talents between McChrystal and Rodriguez that I think creates some opportunities

for us. And so it is in that context that I was referring to fresh eyes.

Mr. ROGERS. With what you can say in an open session, how will what we are doing in Afghanistan now change under this fresh approach?

Secretary GATES. Well, I think that is really for them to get out there and get involved, talk to the commanders, the brigade commanders, talk to the Afghans, and make their own decisions in terms of what changes in our campaign strategy do we need to make. The Admiral may have some.

Admiral MULLEN. I would comment, first of all, General Rodriguez has spent 15 months in the eastern part of Afghanistan, and did exceptionally well and is immersed in their culture and in what the requirements are there. In my position as Chairman, I spend a lot of time trying to figure out who should go to what jobs. And in this case, long before the decision was made or even on the table to change leadership in Afghanistan, General McKiernan and General Odierno, both due to rotate out of those jobs next year, I had done a considerable amount of work contacting and discussing with leaders from all services who the best individuals would be for the future. And Generals McChrystal and Rodriguez have come out at the top of the Army list—and lots of other people as well—for the last 18 months that I have been on this job. And, obviously, before that as well. They are the best we have right now. And I am greatly dependent on great leadership. They are great leaders. And I think they will change the calculus and move us in a way that will create potential for success.

Mr. ROGERS. Well, what I am trying to get at is, what will be this new strategy? Will it be similar to the surge in Iraq? Or just what does it amount to?

Admiral MULLEN. It will be lessons taken from Iraq. It is counterinsurgency strategy. I was just in RC East, and I was taken by how much our troops have absorbed that almost as a way of life. So we have enough troops in the east. We just put in an additional brigade in January.

We are putting more troops in the south. But it is not just military, it has got to be the civilian side, it has got to be putting the Iraqi Security Forces, Army and police, in a position to provide for their people; and, in creating a secure environment, allow for the other things that need to be done to get done, including a dramatic reduction and elimination, if possible, of the opium problem.

So there is an agriculture piece here that lays down right over where they are growing poppies, and that has got to happen as well.

Admiral MULLEN. The Government of Afghanistan, at every level, has to get to a point where it can provide for its people, and they are falling short there now, and also it is a terrible amount of corruption. So those are all things that have to be addressed not just by our government, but by all of the nations that are involved there.

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

Mr. Bishop.

OUTSOURCING

Mr. BISHOP. Thank you, Mr. Chairman, Secretary Gates, Admiral Mullen, Mr. Hale. Thank you so much for your service.

For the record, I would like to associate myself with the remarks of Mr. Kingston to the extent that we jointly support the 4th Brigade Combat Team at Fort Stewart. I just want to do that for the record.

I would like to talk with you for a moment about outsourcing. I am sure that you are aware on March 23, the committee wrote you expressing concern about DOD's outsourcing. Can you remind us or refresh our memories on what the response was, if there was a response?

Secretary GATES. I don't know about the specific response, but I will tell you that this has been a concern to me as well. And part of the proposals for the fiscal year 2010 budget is to begin in a fairly dramatic way replacing contractors in management services, management support and professional services, to replace contractors in those areas with full-time civil service employees.

Our goal is to hire 13,000 new civil service employees in fiscal year 2010, and overall through the next 5 years to hire 33,000.

Our goal is to take the percentage of contractors in those areas from the current 39 percent of the workforce back to 26 percent, which is where it was before 2001.

Mr. BISHOP. Mr. Secretary, can I ask you then why the Department has not suspended its A-76 outsourcing efforts in 2009?

Secretary GATES. Well, we can't get rid of outsourcing altogether, and if there is a specific aspect of this, I am happy to take a look at it.

Mr. BISHOP. Well, the A-76 studies, ongoing, presumably to continue the outsourcing while at the same time you are budgeting for 2010 to reduce the outsourcing.

Secretary GATES. Well, as I say, in these particular areas we are reducing from 39 percent to 26 percent. So there is still 26 percent that even at the end of 5 years or so, there are going to be some kinds of services outsourced.

Mr. BISHOP. I appreciate your comment there, but it is a very serious concern for the subcommittee, and we have had this concern for some time at the large amounts of outsourcing. And, of course, we have expressed it, and we appreciate very much the fact that you are responding in 2010.

And, of course, if you still have a need for it, you have to go forward with that, the remaining outsourcing needs. But I am very uncomfortable with the A-76 studies because I really feel like we probably need to do as much in house as we can possibly do.

Thank you, Mr. Chairman.

Mr. MURTHA. I just want to reiterate my concern. Last year we took 5 billion out of the contracting services. We put 1 billion in for direct hire. The Department objected strenuously to what we have done.

But I appreciate the fact you are now going in the right direction after a little bit of prodding.

Mr. Hinchey.

PRESIDENTIAL HELICOPTER

Mr. HINCHEY. Thank you very much, Mr. Chairman.

Mr. Secretary, I would like to return to a subject that was mentioned a few times earlier, and that is the VH-71 helicopter. And it seems to me, based upon all the information that I have been able to obtain, that it really makes perfect sense for us to continue that project for a variety of reasons.

First of all, for the safety and security of the present President, the helicopter that he is using now, that system, was designed more than a half century ago, and the helicopter that he is using was manufactured about 35 years ago. The effectiveness and the efficiency of that device, based upon its age, is not nearly what it ought to be, and the safety and security of it is diminishing. That is a vehicle which is becoming weaker and weaker, and in some cases it seems to be even falling apart. So the need for a new system is, I think, very, very obvious.

And the project that was initiated after the attack of September 11, 2001, and then the contract which was put into place in 2005, brought about this VH-71. And the VH-71, frankly, seems to make perfect sense. It is much more effective and efficient than the existing helicopter. It can travel further, I think 200 miles, from what we have been told.

And the new information that has come out indicates clearly that the structural integrity is stronger than what some evaluation of it came out erroneously earlier, and that the service life is much longer, service life anticipated to be approximately 30 years.

So the fact that this system has already experienced approximately \$4 billion in expenditure, and the documents themselves, or the helicopters themselves, are essentially ready to go. Five of them are almost ready to move. They have been all through the tests and all through the operations that lead to that final movement. And then there are four behind that, and it would take a minimal amount of money to bring this whole system into play.

And bringing this whole system into play would make the safety and security of the President much more sound and secure, would enable him to engage in the kinds of thing that he would have to do under threats and dangers that may occur and his response to that.

We have to keep in mind that on September 11, that helicopter that was crashed down in Pennsylvania as a result of the courage of the people who were being transported in that and overcoming the hijackers, that that helicopter was likely to slam into the White House. So that means that it may be that something like that or something similar to that in some way may be a threat to this President and the future Presidents.

So it just seems so obvious, based upon the amount of money that has been spent, based upon the improvement in this helicopter design, much more so than the existing one, based upon the age of the existing one and the fact that it doesn't function effectively, all of these things and more, and much of the more is classified and can't really be talked about in this particular context, all of that and more makes it clear that this VH-71, this Marine One helicopter, really is needed.

I would just ask you deeply if you would go back and take another look at the facts, particularly the information that has come out more recently on the strength, the solidity, the length of the life of these helicopters and the ability for them to function effectively. Go back and take another look at this. And I think and hope that you would decide on your own, as many of us have, that this is something that really needs to take place. So I am just asking you, sincerely, to engage in that. We really need this new helicopter.

Secretary GATES. Well, first of all, I would say that there is no question about the fact that the current helicopters that the President is flying in are safe and secure. The Navy has confidence in that, and I don't think the Secret Service would allow the President to get on it if there wasn't complete confidence in it.

And the reality is that it may be that the airframe on some of these helicopters is 30 or 35 years old, but virtually everything else has been replaced. For example, they are replacing rotors right now. So there is life extension.

If you are talking about going with the whole system, if you are going with both increments 1 and 2 for the VH-71 helicopter—

Mr. HINCHEY. Only about increment 1.

Secretary GATES. Okay. The Navy's estimates would be about a \$9.4 billion program.

We currently have spent \$3.2 billion on it. It has 55 percent of the range of the current helicopter the President is flying in the increment 1. It does not meet a lot of requirements in terms of other protections, whether it is chemical, biological, nuclear, communications and some of the other things.

Even if we bought increment 1, we would have to then initiate a new Presidential helicopter program anyway to get to some of the capabilities that were going to be in increment 2.

So whether or not you do increment 1, you are going to end up with a new Presidential helicopter program. And we believe that the helicopters he is flying in are safe. The Navy believes their lives can be extended until we can get a new helicopter.

Frankly, if we went with increment 1 with 23 aircraft, the cost per aircraft would be \$485 million apiece, and I think the President has a real problem with that.

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

I just want to say one thing. One question I asked these 13 people, I had them lined up, saying we are not going to pay that much for a helicopter, meaning the two. I said, we all appreciate the President. We all appreciate his safety. But what about us? They just laughed. I don't know if they laughed because to hell with you or what, but what about Secretary of Defense, what about the Chief?

I mean, you know, the Secret Service went way too far in this thing. You have to keep them under control as you go forward with this program. I mean, that is all there is to it.

Secretary GATES. Well, we do have to deal with the requirements, and that is one of the things I said that we are thinking about is, in fact, all of the requirements that are being placed on this helicopter may not be feasible in a single helicopter.

And maybe we look at one for escape and one for regular everyday use, but we will go back and look at them.

Mr. MURTHA. Mr. Young, any questions?

Mr. YOUNG. No, sir.

Mr. MURTHA. Mr. Dicks has one question.

C-17 AIRCRAFT

Mr. DICKS. Thank you, Mr. Chairman.

I wanted to ask you about the C-17. This is an important program, and, you know, as I understand it, we are coming to the end of it. But there are going to be some in the supplemental. But there is another issue tied to this, I think, and that is the fact that Congress has kept some C-5s in service that should be shut down.

And I wanted to give you a chance to talk about that. Our committee has supported you on this. The House committee has supported you, House Armed Services Committee, but we don't seem to be able to get this done. And could you explain why it is so important?

Secretary GATES. Well, there is a restriction. There are significant restrictions on our ability to retire the old C-5s. We believe that the mobility force, that we originally—that we sized a few years ago, 2 or 3 years ago, of 292 aircraft, 180 C-17s and 112 C-5As would meet the needs for two simultaneous, conventional conflicts, major conventional conflicts, three domestic disaster events here in the States, and a number of lesser contingencies.

We now have 205 C-17s. It looks like we may be headed for a few more C-17s, and we have still got 112 C-5s. This is more than the Air Force believes they need, and it goes back to what I have said in my opening statement. Every dollar we spend on excess capability is a dollar we can't spend on something that the Air Force really does need.

And so that is what our problem is, and we have worked with the Armed Services Committee and the House, and also we are working with the Senate to try and get the restrictions lifted that would allow us to retire some of the C-5As and save some money in that respect.

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

We agree with you, Mr. Secretary.

And the Committee adjourns until tomorrow at 10:00.

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

Question. Secretary Gates, you have completed the F-22 program at 187 aircraft and propose to retire 250 Air Force fighters creating a gap in capability. These decisions will lock in the range of national security options for decades into the future. How do you rationalize these decisions?

Answer. The aircraft retirement target is essential to meet warfighting requirements, maintain readiness, and perform missions safely. With respect to the F-22, detailed analysis showed that 187 Raptors, combined with a robust buy of the F-35 Joint Strike Fighter, are what we need to deal with future threats. The Department does not foresee a gap in capability as a result of completing the F-22 program of record and the proposed Air Force fighter aircraft retirements. Furthermore, the savings from retiring the legacy fighters are being used to fund high-priority programs relevant to today's and future threats. Rest assured that the Department will continue to assess the nation's needs for defense and will pursue procuring the right size and mix for all of our forces.

Question. What has changed in the last year to justify your proposals relating to tactical aircraft? What studies should this Committee be aware of that substantiate these decisions?

Answer. During the last year the Department continued to wage two wars in Afghanistan and Iraq and both of those conflicts have provided valuable lessons learned about our personnel, weapons systems, and readiness. A key lesson learned from this experience is the importance of unmanned systems such as the MQ-1 and MQ-9. Additionally, the Department was guided by the current National Defense Strategy, most recent threat projections, and world-wide geopolitical events that provide indications of where and how our military forces will be required in the near future. Over the past several years the Department has studied in depth the number and mix of tactical aircraft needed. The Joint Air Dominance Study informed our view on F-22 and JSF. The Fiscal Year 2010 Defense Budget is a reform budget. The budget request represents the initial step in rebalancing the Department's programs to enhance our ability to fight the wars we are currently engaged in, and address the scenarios we are most likely to face in the years ahead. The Department will continue that process with the Quadrennial Defense Review (QDR). With respect to tactical aircraft, the QDR will study the appropriate mix and size of the future force. Analysis from the QDR will assist the Department in planning for the Fiscal Year 2011 budget, and form the basis for tactical aircraft procurement in future budget requests.

Question. Secretary Gates, the platform that will provide the most relief for the tactical fighter shortfall is the F-35 (Joint Strike Fighter). As with the majority of complex, new weapons systems, this program has seen its share of problems. In fact, the Marine Corps variant has been delayed from its original schedule due to engine problems. Do you anticipate the Joint Strike Fighter (JSF) becoming operational in time to help with the shortfall or continue to make it worse? Does the Department have a contingency plan to mitigate the tactical aircraft shortfall should the JSF program continue to slip?

Answer. The Initial Operational Capability (IOC) schedules for the Joint Strike Fighter (JSF) are 2012 (USMC), 2013 (USAF), and 2015 (USN). The JSF program is managing the development, test, and procurement of the three variants to meet the Services IOC requirements. The Department believes the JSF program is making solid progress in addressing earlier issues that created some schedule delays. In 2008, the Department chartered a Joint Estimate Team (JET) to provide an independent assessment of the program cost and schedule. The JET identified F-35 development and production risks that could negatively impact schedule. In the FY 2010 budget request, additional development funding was added as a result of the assessment. The additional funding requested in the FY 2010 budget submission will help address those risks, and the Department will review the progress again in preparation for the FY 2011 budget submission. The Department is committed to ensuring the success of the JSF program and providing the three U.S. Services the critical tactical aircraft capability that they require. The Department will also assess the appropriate mix and size of the tactical aircraft force structure in the upcoming Quadrennial Defense Review (QDR). Analysis from the QDR will assist the Department in forming the basis for tactical aircraft procurement in future budget requests. The analysis will look at all options available to address force structure requirements should the JSF program be delayed.

Question. What are the proposed savings from the early retirement of aircraft like the F-15, F-16, and A-10's? Were infrastructure needs (like Military Construction) a part of the Department's consideration? The Department has previously estimated savings from reducing manpower to pay for recapitalization of older systems. The savings never materialized. What makes this budget different?

Answer. The aircraft retirement target is essential to meet warfighting requirements, maintain readiness, and perform missions safely. In FY 2010, the Department plans to retire 384 aircraft across all the Services, both fixed wing and rotary wing, with a total estimated savings of \$497.5 million to reapply to new aircraft operations. The cost savings associated with retiring these aircraft is already incorporated into the Services' budgets. If Congress does not support these retirements, the Services must continue supporting these aircraft and other planned priority programs will go unfunded.

The FY 2010 President's Budget does not adjust infrastructure (like Military Construction) for aircraft retirements.

To meet the demands of an uncertain and dynamic international security environment, the FY 2010 President's Budget reflects a broad reallocation of resources across diverse mission sets that make strategic sense. This budget does not reduce the Services' manpower, but rather redistributes the positions to higher priority missions that directly support the combatant commanders.

Question. Some of your decisions rely on making decisions in the Quadrennial Defense Review which is expected out next year, while other decisions have been made without strategic guidance from the QDR. What analyses have the Department conducted to ensure you are making the correct strategic decisions to guide the FY10 budget?

Answer. The FY10 budget decisions were informed by the 2008 National Defense Strategy, lessons learned from operations in Afghanistan and Iraq and prior reviews and analyses of specific issues associated with the relevant systems. The QDR will build on the same strategic guidance that informed the FY10 decisions to further address current and future threats and reform the way we do business. This budget reflects substantial analysis conducted across the Department over several years, culminating in intensive discussions among the Service leadership, the Chairman and Vice Chairman of the Joint Chiefs of Staff and me. Where I felt decisions would require further analysis and examination to ensure a complete assessment of capabilities, capacity, requirements and risks, I deferred them to the Quadrennial Defense Review.

Question. The future development of the LCS ships is important to the national defense and my district, however, with such a low shipbuilding rate, how do you envision reaching and maintaining a fleet of 313 ships? The 2009 out year budget showed an increase in the quantity of ships being requested, but the Committee has seen a promise of more ships in the out years before that were never realized. Just last year, the 30 year shipbuilding plan showed a fleet size of 313 ships being achieved in 2019. The year before that showed it being achieved in 2016. With this disturbing trend, can you reassure the Committee to your commitment to ensuring the shipbuilding plan stays intact?

Answer. The National Security strategy and Quadrennial Defense reviews, currently in progress, will determine the shape of the Navy's future. While the demands placed on the Navy for forces by the Combatant Commanders and by our force presence, Security Cooperation, and Humanitarian Assistance missions continue to be significant, we have been able to meet these demands largely with the force we have in commission today. The 313 force construct represented both a total inventory of ships and a specific mix of ships and was focused on the threats that were envisioned for the 2020 timeframe.

Since completing the Force Structure Assessment that led to the 313 requirement, there have been a myriad of changes in the strategic security environment around the globe. There has been a burgeoning proliferation of advanced cruise missiles, submarine technology is getting ever more difficult to counter, and ballistic missile capabilities are becoming more precise and lethal. All of these challenges require the Department to reassess its force structure and mission capabilities.

While we continue to review these challenges, there also is a budgetary reality that we must face. As we increase our capacity to conduct 21st century tasks, such as Special Operations, Civil Affairs, Irregular Warfare, Humanitarian Assistance, and Counterinsurgency, it will cause us to rebalance our conventional capabilities. This might present additional challenges to maintaining existing levels of force structure for certain ship types.

Until we complete these ongoing studies and determine the priorities for these critical areas, it is difficult to confirm a specific Navy force structure. However, I can assure you that the Department is committed to building a force structure that does not place our sailors, airmen, and Marines at risk. Whether this is a force of 313 ships, or one larger, or one smaller, we will ensure they have the tools they need to be successful in pursuit of their mission and that they are able to do so without undue risk.

[CLERK'S NOTE.—End of questions submitted by Mr. Boyd. Questions submitted by Mr. Tiahrt and the answers thereto follows:]

Question. How would the necessary medical supplies such as bandages, blood supply, and equipment be supplied to theater and funded?

Answer. Additional costs for medical supplies are included in the Department's supplemental appropriation request for Overseas Contingency Operations (OCO). The majority of these requirements are generated by models and planning factors based upon the number of personnel, types of units deployed, and the types of contingency operations expected during the deployment. The funding included in the OCO supplemental for supplies is allocated to the Military Services or to the Defense Health Program depending where the costs are incurred.

ADDITIONAL TROOPS IN IRAQ

Question. As a result of the President's Afghanistan strategy review, the Secretary of Defense has increased forces for Operation Enduring Freedom by 21,000 including 17,000 combat troops and 4,000 trainers.

How will additional troops deployed to Afghanistan affect the Military Health System (MHS) and its ability to treat the families and dependents?

Answer. When our medical personnel deploy, we generally lose capability in the military treatment facility (MTF) supporting the deployment. However, in advance of the deployment, MTF commanders work with the TRICARE Managed Care Support Contractors to either provide physicians and ancillary staff to work in the MTF and refine the civilian TRICARE network to ensure that needed care is available, either in the MTF or in the network.

The MHS is structured so that the purchased care subsystem augments MTFs by expanding, as necessary, to absorb overflow of workload from the direct care subsystem when the MTFs experience increases in demand for services or reduction in capability and/or capacity due to staff deployments. The efficacy of this structure has been proven throughout deployments, with data from a number of sources—formal surveys of providers and beneficiaries, monitoring of TRICARE customer service logs, regular meetings with the Military Coalition, data showing the capacity of TRICARE purchased care to absorb a tremendous increase in mental health workload since 9/11—all indicating that the MHS has been functioning as designed, with no systemic problems preventing our beneficiaries from accessing purchased health care services. We anticipate this to continue when additional deployments to Afghanistan occur.

Question. What additional medical personnel will be needed to support the additional troop presence in theater?

Answer. The number and skills of medical personnel in theater is dependent upon the size and missions of the Forces assigned, which require operational decisions not medical decisions. Therefore, the Joint Staff and the Combatant Commander determine the need and assign the staffing requirement to the Service components. The Services would determine which medical resources were available and assign specific units.

Question. Secretary Gates, one of the highlights of this budget is the emphasis on irregular warfare. As you know, Project Liberty in Afghanistan and Task Force Odin in Iraq have been designed to place additional ISR capabilities quickly into the battlefield. So far, over \$2 billion has been appropriated in FY08–09 for this ISR surge capability. What do you see as the future growth of manned ISR combat air patrols?

Answer. ISR Task Force-driven FY08–10 investments will generate over 50 manned ISR aircraft. The first wave of these platforms has already begun arriving on CENTCOM battlefields; deliveries will continue over the next 12-plus months. In combination with Service program of record deliveries of unmanned ISR platforms, we are rapidly and dramatically expanding the airborne ISR capability set available in theater.

The driving rationale for the ISR Task Force adding ISR capacity in the form of manned ISR platforms was rapid fielding demonstrated by the fact that these very complex platforms are already delivering, well inside the normal Department of Defense procurement timelines. The ease of integrating multiple, newer emergent sensors, superior speed, and outstanding operational flexibility and responsiveness are very appealing characteristics of manned ISR aircraft. When operationally employed in combination with unmanned ISR platforms that deliver superior persistence, manned ISR provides an invaluable complement for irregular warfare operations.

As we move forward, the Department and the Services are carefully analyzing long-standing and emergent theater ISR requirements and refining plans and programs aimed at satisfying those requirements. It is my expectation that ISR growth will continue, in both the manned and unmanned categories, throughout the FYDP. However, the details of the balance between manned and unmanned growth are still evolving.

Question. Another aspect of Irregular Warfare is light-attack aircraft, like the AT-6B. The Navy has started a program called Imminent Fury that originated from a requirement from the Navy Seals in Afghanistan for a light-attack turboprop aircraft. The Air Force is also examining the value of a light-attack aircraft with a new program called AO-X. What is your vision for developing a light-attack aircraft like the AT-6B?

Answer. The Department will be looking carefully at light-attack aircraft capabilities in the Quadrennial Defense Review (QDR). Light-attack aircraft offer viable candidates for Irregular Warfare operations, particularly in providing innovative al-

ternatives for intelligence, surveillance and reconnaissance; mobility; command and control; and light strike applications. While our conventional assets are diverse and agile enough to execute all of these functions over the threat spectrum, they might not always be the most cost effective employment of our forces in an Irregular Warfare scenario. Hence, the QDR will provide a timely forum for assessing light attack aircraft in depth, as potentially flexible and affordable options for meeting those requirements.

Question. As the drawdown of U.S. Forces from Iraq progresses, the importance of ensuring that the Iraqi Armed Forces has the necessary equipment has increased. Recently the Iraqi Ministry of Defense signed an agreement to purchase 8 aircraft trainers, the T-6As. They have also requested to purchase the AT-6B, a light-attack aircraft. What is the equipping plan for the Iraqi Air Force? What is the equipping plan for the Afghani Air Force?

Answer. The Multinational Security Transition Command—Iraq is focused on preparing the Iraqi Security Forces (ISF) for counterterrorism and counterinsurgency operations as U.S. forces withdraw. With this in mind, the Iraqi Air Force added to their existing rotary wing inventory of 16 Mi-17s and 16 Huey Its in March–April 2009 by ordering 24 Eurocopters, 22 Mi-17s and 24 Bell 407 armed scout helicopters with deliveries expected to begin by late 2009. Other significant Iraqi Air Force orders include 15 PT-6A training aircraft and simulators—jointly funded by the Iraqis and the U.S. in May 2009—to improve training capabilities for the eventual acquisition of light attack aircraft and a multi-role jet such as the F-16. While the Iraqi Air Force initially considered acquiring the armed AT-6B, they are reviewing lower cost alternative light attack aircraft as well. Comprehensive long-term plans for equipping the Iraqi Air Force beyond 2012, however, are currently being developed.

Combined Security Transition Command—Afghanistan is building the Afghan Army Air Corps for the counterinsurgency fight. The current aircraft inventory is 35: 17 Mi-17 helicopters, 9 Mi-35 helicopters, 6 An-32 fixed wing aircraft, 1 An-26 fixed wing aircraft, and 2 L-39 fixed wing aircraft. The equipping plan calls for the Air Corps to grow to 128 total aircraft by 2016: 60 fixed wing (20 C-27s; 18 light attack aircraft; 8 intelligence, surveillance and reconnaissance aircraft; 10 trainers; and 4 screeners) and 68 rotary wing (61 Mi-17s and 7 trainers). Final procurement decisions have not yet been made.

Question. Several months ago, I had the opportunity to visit with students studying at Fort Leavenworth's Command and General Staff College. I met students from each branch of the US military in addition to military members of allied nations. What is the Department of Defense's strategic plan to increase foreign student enrollment at the Army Command and General Staff College, the Air Command and Staff College, and the Joint Forces Staff College? What steps have the Department taken to expand enrollment at these schools for federal government employees outside of the Department of Defense?

Answer. Currently international students represent approximately 10 percent of resident Staff College classes; federal civilian students represent approximately 2 percent. The remainder is active and reserve component officers of the Armed Forces (to include the Coast Guard) (88%).

Current percentages of international and federal civilian students are considered appropriate. Part of this is an appreciation for how much capacity there is for these colleges to increase their attendance.

Strategic actions have been therefore aimed at getting priority partners into the schools. Strategic documents such as the "Guidance for the Employment of the Force" (GEF) prioritize nations and Alliances not only to harmonize Combatant Commander and Service Chief engagement efforts but also to inform invitations to partners to attend the various schools. Therefore, the Department of Defense has consciously put priority partners at the head of the line. In 2008, 67 percent of school seats were filled by priority partners.

You have asked specifically about Command and Staff College level programs. Additionally, it is important to highlight international and federal civilian student participation at the senior level War Colleges.

The Staff College coursework is focused on warfighting at the tactical to operational levels of both traditional and irregular war. It is aimed at a younger student body (10 years of service) still developing inside their individual warfighting competencies and is as a result, less applicable to non-DOD—especially civilian-students.

In comparison, War Colleges operate at the operational and strategic levels and have student bodies (15–20 years of service) that are already mature in their individual competencies. This makes a War College education more accessible to non-DOD personnel.

War College student bodies have 20 percent less US officers than at the Staff Colleges. This articulates as 68 percent US officers, 14 percent international officers and 18 percent Federal civilian.

[CLERK'S NOTE.—End of questions submitted by Mr. Tiahart. Questions submitted by Ms. Granger and the answers thereto follow:]

Question. Mr. Secretary, we have not seen aircraft production rates like what is intended for the JSF since the F-16 was built in the early 1980's. Obviously, we are involved in a different style of conflict, but it is undeniable that positive lessons-learned in procurement were obtained and should be used with the taxpayer's dollar.

At full rate production for the JSF, we will be producing one aircraft per day. In order to achieve full rate production quickly and to meet cost requirements, building JSFs must be accelerated now during low-rate production by almost doubling each year's previous rate. Quickly getting to full-rate production on the F-16 years ago proved to be KEY in keeping costs down for an affordable US and allied aircraft. How does the FY 2010 budget proposal help to accomplish the same affordability goals achieved in the early 1980's during the F-16 program?

Answer. Carefully managing investments in the JSF production line is critical to getting to full-rate production in 2015 and meeting our warfighter commitments while minimizing the cost to taxpayers. The Department plans to procure 513 US F-35 jets between now and FY 2015, which is an increase of 28 jets from the previous program of record. The primary reason for the change was to smooth the year to year ramp rate, including the planned procurements from our 8 JSF international partners, and appropriately stress the production system. The FY 2010 President's Budget funds 30 US jets for Low Rate Initial Production Lot 4 and fully funding these jets is critical toward achieving that one aircraft per business day rate.

Question. Mr. Secretary, recent defense budgets show investments in rotorcraft science and technology, including demonstrations, ranging from \$100 million to \$113 million. Back in the 1980s, the nation was investing in excess of \$250 million in rotorcraft technology or more than twice the amounts we are allocating today. Given our dependence on rotorcraft in wars such as those in Iraq and Afghanistan, shouldn't the nation be investing more in future vertical flight capabilities? Aren't helicopter resources the best suited for our forces remaining mobile in the harsh terrain of Afghanistan in a dynamic counter-insurgency effort?

Answer. These are the kind of questions we are getting answered in our ongoing Quadrennial Defense Review and its follow-on program and budget review. In considering future resource and funding options for helicopters, we need to take into full account today's threats and the capabilities needed to counter these threats, to include unmanned aerial vehicle capabilities.

Question. Also, specific statistics from "icasualties.org" cite helicopter related losses as the third largest cause for loss of life in Operation Iraqi Freedom (OIF), and they are THE largest factor in loss of life in Afghanistan with Operation Enduring Freedom (OEF). This past year, Congress added Section 1043 in the National Defense Authorization Act to review the causes of these losses and potential strategies to reduce these losses. That report is due in August of this year. Mr. Secretary, is the Department of Defense prepared to make needed investments in vertical flight aviation science and technology, with specific focuses on safety, survivability, and improved capabilities to reduce helicopter losses in the future and ultimately reduce our casualty figures?

Answer. In response to section 1043, the Department is completing the study on rotorcraft survivability to identify the causes of helicopter losses and to make recommendations to reduce them, and a draft report is currently under review. In addition, the Department is developing a science and technology plan for future vertical lift aircraft and rotorcraft as part of a larger review of our efforts in response to section 255 of the Duncan Hunter National Defense Authorization Act for Fiscal Year 2009. The recommendations from the survivability study will be addressed within that plan, which is projected to be complete by the third quarter of Fiscal Year 2010. The Department will take appropriate measures to address the recommendations from these reviews and continue to improve the safety of helicopters for our warfighters while giving them the capability they need.

[CLERK'S NOTE.—End of questions submitted by Ms. Granger.]

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