[H.A.S.C. No. 110–99]

CURRENT STATUS OF THE JOINT MINE RESISTANT AMBUSH PROTECTED (MRAP) VEHICLE PROGRAM

JOINT HEARING

BEFORE THE

SEAPOWER AND EXPEDITIONARY FORCES SUBCOMMITTEE

MEETING JOINTLY WITH

AIR AND LAND FORCES SUBCOMMITTEE

OF THE

COMMITTEE ON ARMED SERVICES

HOUSE OF REPRESENTATIVES

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CURRENT STATUS OF THE JOINT MINE RESISTANT AMBUSH PROTECTED (MRAP) VEHICLE PROGRAM

House of Representatives, Committee on Armed Services, Seapower and Expeditionary Forces Subcommittee, Meeting Jointly with Air and Land Forces Subcommittee, Washington, DC, Thursday, November 8, 2007.

The joint subcommittee met, pursuant to call, at 2:04 p.m. in room 2118, Rayburn House Office Building, Hon. Gene Taylor (chairman of the Subcommittee on Seapower and Expeditionary Forces) presiding.

OPENING STATEMENT OF HON. GENE TAYLOR, A REPRESENTATIVE FROM MISSISSIPPI, CHAIRMAN, SEAPOWER AND EXPEDITIONARY FORCES SUBCOMMITTEE

Mr. TAYLOR. The joint subcommittee will come to order.

Congresswoman Carol Shea-Porter, a member of the full committee, has requested permission to join us today during this important briefing.

Without objection, I would like to make it in order for her to participate. So moved.

Today, the Seapower and Expeditionary Forces Subcommittee joins the Air and Land Forces Subcommittee to receive testimony on the current status of the Mine Resistant Ambush Protected vehicle, MRAP. This hearing continues our formal series of oversight activities on the mine resistant vehicle. Force protection will always be at the forefront of these subcommittee meetings and brings us here today.

The United States of America has over 164,000 troops still operating in Iraq. Improvised Explosive Devices (IED's) constitute about 70 percent—or are responsible for about 70 percent of the casualties in Iraq; and, regrettably, more than half of those, or close to half of those, are caused by underbelly attacks on vehicles in Iraq.

The MRAP family of vehicles offers significantly more protection and survivability for our troops. This is due to several factors: vehicle height, increased weight of the vehicle, the V-shaped underbody which helps deflect the force of the blast away from the body of the vehicle.

We are aware that a total, integrated approach using all available technologies to combat IEDs is vital, but the last line of defense for our troops in the IED chain is an armored vehicle. Right now, MRAP should be that vehicle.

It is no secret that I, along with many other members of this committee, have not been satisfied with the response of this administration to force protection needs of our troops. During our last

hearing, we raised concerns over settling an artificially low theater requirement, repeating past mistakes in terms of vehicle production, adequately mobilizing the industrial base, and failing to properly fund the program.

Three weeks ago, I had the pleasure of meeting with Secretary Young in my office; and the information he briefed me on showed me a substantial improvement in DOD's execution of the mine resistant vehicle program. At the time of the July 19th hearing, just over 240 MRAPs had been produced and only 176 had been fielded to Iraq. There is an unfunded requirement of over 5 billion.

Today, over 1,500 MRAPs have been produced and close to 700 vehicles have been fielded. The Department of Defense requirement now stands at 15,000 vehicles, up from the initial request by this administration just 1 year ago of only 4,000. The amended supplemental now requests full funding for this new equipment.

From day one, Congress has said to tell us what it would take for MRAP and we will provide the money you need. We want to reiterate that statement.

Now is not the time to be complacent. We still have major production fielding and sustainment challenges ahead of us. Over the next few months, there will be a steep increase in the production of MRAPs. Over the next two months, production is scheduled to jump from 440 vehicles per month to a steady 1,100 per month. This 700-vehicle increase is critical to the MRAP fielding, and these subcommittees seek to be reassured that this increase will proceed without a hitch.

If there are any potential problems that might disrupt these ambitious goals, now is the time to state those concerns so that we can help mitigate them. The subcommittees expect to be reassured that industry has been mobilized to meet these ambitious production goals.

The issue of MRAPs goes a heck of a lot farther than just vehicles and people and production lines and kids in theater. This young man is Sean Cooley; and, to my knowledge, he was the first Mississippi guardsman to die. He was deployed in February of 2003—I'm sorry February of 2005—his unit, the 155th; and he died in a Humvee from a blast underneath that vehicle.

A few months later, the day after Easter to be exact, this young man, William Brooks, was the driver of a Humvee. His vehicle was blown up, again from a blast from underneath. William lost both legs. To tell you what a unique individual this young man is, he was saved by the heroic work of a Sergeant Anthony and another sergeant who were able to get two tourniquets on him in a minute. While recovering from his wounds at Walter Reed, William volunteered to help in my office to man the phone after Hurricane Katrina.

William is walking, as seen in this shot, on his prostheses. His short-term goal is to finish Mississippi State University and to walk across the stage to get his diploma on these legs.

I think the sad fact is that Sean would probably be alive and William would probably have his legs if MRAPs had been fielded sooner.

Now there are 168,000 Seans and Williams in theater today. So if this committee loses its temper, gets a little short for people who

aren't working as fast as we think they should or funding that isn't there when it should be, I hope you understand why.

I have had the pleasure to visit two of the facilities that are building MRAPs in the past week. I want to first say, as someone who has worked on a production line, I was impressed by how hard the individuals were working. There is absolutely no complaint there.

I was not impressed by the facilities themselves. There was good equipment. There was a pretty good plan. But, quite frankly, particularly what was done at Space and Naval Warfare Systems Center (SPAWARs), where they are putting the government-furnished equipment onto these vehicles, looked more like a custom cycle shop than Honda mass producing motorcycles.

This isn't a jobs program. This isn't about feathering somebody's nest or putting some jobs in somebody's district. This is a rescue mission.

The most likely way for a young person serving our country in Iraq or Afghanistan to die or be maimed is from an underbody blast to a Humvee. We know that, and the enemy knows that, and we have got to solve that problem.

Now, as someone who has been through a product of base closure and having to lay off 1,300 people in my district, believe me, I understand the misery of having to let people go. But this isn't a jobs program, and we want the vendors to know this. We want the Congress to know this. But, above all, we want the troops to know this is a rescue mission; and we are expecting the folks to tell us today how they are going to perform this mission quickly, efficiently, and then we move on to other challenges that face our Nation.

With that, I yield to the ranking member—I'm sorry—to the subcommittee chairman of Air and Land, Mr. Abercrombie.

STATEMENT OF HON. NEIL ABERCROMBIE, A REPRESENTATIVE FROM HAWAII, CHAIRMAN, AIR AND LAND FORCES SUBCOMMITTEE

Mr. ABERCROMBIE. Thank you. Thank you very much, Gene.

At our hearing July 1st, I indicated that we were having difficulties reconciling MRAP vehicle program office provided data on production schedules. At the time, I noted this as indicative of the challenges involved with a program of this size moving at such a rapid pace.

Since July, the program office and the Department seem to have made significant improvement in responding to those difficulties and providing accurate information; and I commend that effort. However, the MRAP vehicle program continues to present a major acquisition challenge that has broader implications regarding the Department of Defense's tactical vehicle acquisition strategy, expected future combat environments and, of course, how that relates to future budget requirements.

Mr. Chairman, I don't propose at this hearing to pursue with our guests today the question of capital budgeting, but I can assure you that at some point we have to come to grips in the Department of Defense and the Congress has to come to grips with the question of how we finance what we are doing, particularly in capital acquisition of assets such as MRAPs.

We have to have a differentiation between a capital budget and an operational budget; and failure to do that I think is severely undermining everything that Mr. Young, for example, is going to try to accomplish, I can assure you. We will pursue that at another time, but I think it is fair to say that at not quite subliminal level in today's hearing the question of how we finance affects policy with regard to what we finance and when we finance it.

In any event, not so many months ago the Army was reluctant to embrace major procurement for MRAP vehicles and has only recently done so, with the caveat that the MRAP program is not a program of record, indicating that the MRAP vehicles only apply to the current circumstances in Iraq and implying possibly no further use of the vehicles after their use in Iraq.

I know that that is not necessarily the full intention, and for those who are not necessarily familiar with what a program of record is and why we have it and what its implications are, this may seem a bit esoteric. But I think it is fundamental to our discussion not just about MRAPs but in the broader discussion that I have already alluded to.

I am perfectly aware of the fact that the Army is going to have further uses and sees a bigger picture but is also constrained by the institutional requirements that it has, especially if it does not have a program of record, precisely because you get into conflicts over what gets funded and when.

Given that the Department of Defense has determined that the MRAP vehicles are its number one acquisition requirement of the moment, how is it that it appears that future combat requirements are so much different than an MRAP-like vehicle capability will not be required?

Now, again, I won't pursue that at any great length during this hearing, but I assure you that I am going to need and I think the committee is going to need—the committees will need some indication as to why these kinds of vehicles with the kind of armament protection that is proposed in the design protocols that are proposed will not be useful in multiple environments wherever—in warfare, guerrilla warfare—the current kind of proclivities of those we might find ourselves in conflict with might be utilizing.

The DOD has characterized the MRAP as a major defense acquisition program in the highest category, with Secretary Young as the primary acquisition executive, which, parenthetically, I am very happy with and glad of, which probably sends him on a path of doom almost immediately.

I am curious as to why shouldn't this program be considered a program of record? Where do the MRAP vehicles fit into future tactical wheeled acquisitions? Will the fiscal 2009 budget and future years' defense program include appropriate levels of operations and maintenance funding for the MRAP vehicle inventory?

If we are going to make demands on the private manufacturing sector of this Nation, they need to know just exactly what it is that we want, what kind of priority are we giving it and what plans can they make accordingly. That is absolutely fundamental, it seems to me, if we are going to ask the Nation to mobilize on behalf of the soldiers that Gene has indicated are utterly and totally and completely dependent on our good judgment.

I might note that the Stryker vehicle was once considered an interim solution. I think that bears repeating, Mr. Chairman. Other instances can be cited where something of the instance became something of permanence.

Given the planned $25 billion commitment to MRAP vehicles, a commitment that is likely to grow if history holds precedent, and given the lack of proven armored technology that significantly changes current correlation between weight, height and vehicle protection, we had better plan on MRAP vehicles as more than an interim throwaway solution for force protection.

I am also curious as to when and how MRAP–2 vehicles fit into the current strategy and what impacts this program will have on the industrial supply base. Will the MRAP–2 vehicle program be a program of record?

One other issue is that the MRAP program—that this program has highlighted and which is of continuing concern to me is fundamental to the broader issue of joint programs. Many of the current defense acquisition programs are called joint programs. Anytime, by the way—I'm sorry to say, Mr. Young, I keep looking at you here—I'm sorry to say every time I see the word "joint" in front of it I figure, uh-oh, the smoke screen is going up. We will use the word "joint" and then watch all the in-fighting take place. They are labeled joint programs. However, if you peel back a layer, you find that the program is joint only in name.

While MRAP vehicles are being procured jointly, there is a lack of standardization among the mission-essential equipment being integrated into the vehicles. The MRAP vehicles are all being used against the same threat in similar operational environments, yet each military service and Special Operations Command has its own specific equipment package. As a result, a facility doing the installation work is potentially having to integrate, at least by my count, now 24 different vehicle configurations.

I don't see how that can be done. I am not sure it should be done. I am open, I am not an engineer, I am not an automotive engineer, certainly not an expert in this by any stretch of the imagination in terms of manufacture and configurations, but it strikes me that 24 different vehicle configurations at a minimum causes enormous logistical difficulties for the manufacturer and those we are asking to do the production, let alone what the doctrinal implications of that are in terms of jointness.

As monthly production numbers increase dramatically, these many configurations could generate, I believe, major problems once the basic vehicles are delivered to where the final integration is done. Ultimately, this I think will result in delay in the vehicles being delivered to Iraq or elsewhere.

If there was one standardized mission equipment package or at least fewer configurations than currently planned for all the services and the Special Operations Command, this could potentially accelerate, I believe, the installation process and, in turn, get more vehicles to Iraq and elsewhere at a much faster rate. It is imperative in my judgment that the civilian leadership and the Department of Defense effectively address the problem of joint acquisition programs which may be in name only.

I am hoping the witnesses today will be able to respond to these issues, particularly the programs of record and the question of joint acquisition programs and their efficacy, and assure the subcommittees that every option is being pursued to produce and field these vehicles since what we are really discussing today, as the chairman has so eloquently expressed, is the protection of our men and women in uniform.

Thank you for your indulgence, Mr. Chairman.

Mr. TAYLOR. Thank you Mr. Abercrombie.

The Chair recognizes the ranking member and former chairman of the Seapower Subcommittee, Mr. Bartlett.

STATEMENT OF HON. ROSCOE G. BARTLETT, A REPRESENTATIVE FROM MARYLAND, RANKING MEMBER, SEAPOWER AND EXPEDITIONARY FORCES SUBCOMMITTEE

Mr. BARTLETT. Thank you, Mr. Chairman.

Mr. Chairman, I also want to thank our panel for being with us today. Mr. Chairman, thank you for continuing to have these MRAP hearings. The information we learn is invaluable.

During the last two MRAP hearings, I mentioned in my opening statements that I wanted to hear assurances from our witnesses that the industrial base was being positioned to support this critical MRAP requirement. Based on the increased requirement and the recent decision to down-select from five to three MRAP vendors, I still have questions about the industrial base; and I am very pleased that we have two distinguished panels before us today to address my concerns. We need to gain a better understanding of any industrial base constraints and what mitigating measures are being pursued to remedy potential choke points.

Thank you for being here, and I look forward to your testimony.

Thank you, Mr. Chairman.

Mr. TAYLOR. Thank you, Mr. Bartlett.

The Chair now recognizes the gentleman from New Jersey, the Ranking Member of the Air and Land Subcommittee, Mr. Saxton.

STATEMENT OF HON. JIM SAXTON, A REPRESENTATIVE FROM NEW JERSEY, RANKING MEMBER, AIR AND LAND FORCES SUBCOMMITTEE

Mr. SAXTON. Today he is the cleanup guy.

Thank you all for being here. This is indeed an important hearing and an important topic.

I often think to myself of the changes, the dramatic changes in warfare that have occurred since I first sat here in this room at hearings like this one; and today is a hearing that is intended to help us develop the capability to deal with some of those changes. The MRAP program obviously is important for those reasons.

At end of the day, I think we need to know the following: Number one, is the recent decision to down-select from five to three vendors in the best interest of our warfighters? Two, is the defense industrial base postured to meet the current requirement of approximately 15,000 MRAPs and by when? Three, what are the potential bottlenecks and how can we help alleviate them if there are some? And, finally, four, have we provided you with the necessary funding

in a timely manner to execute all of the necessary requirements that you have?

I would like to just for a moment turn to another subject. As I mentioned just a minute ago, things change quite rapidly. One of the changes that I have seen happen is that this year we will spend approximately 70 percent of our Defense budget on operations and support and 30 percent on modernization. This is different. In 1985, this was not the case. In the 1980's, we spent about 55 percent of our budget on operations and support and 45 percent on modernization. We established a 30 percent modernization budget in the 1990's, and that is where we are today.

Recently, General Casey and Secretary Geren were here; and their message was that the Army is out of balance. I believe that it is not just the Army that is out of balance, I believe that it is our defense structure that is out of balance. It seems to me that the situation that we are in today in terms of our tactical wheeled vehicle fleet is a microcosm of this out-of-balance theme.

And, without prolonging this, let me just say that it seems to me that as we proceed down the road with MRAP, which we all believe is a necessary element to protect our warfighters and help them be successful, we also have recognized, as one of the previous speakers said, that MRAP does not provide us with all the answers. It has problems in urban terrain. It has problems being agile. And it seems to us seems to me at least that we need a fleet of MRAP-type vehicles or at least with MRAP-type armor with different capabilities to enable our warfighters to do the variety of tasks that we expect them to do.

This is not the place to talk about a future program, but I want to make sure that in the future, regardless of the type of mission environment that these light tactical vehicles must go into, that every soldier and every marine has MRAP-like or better protection, not just the heaviest variants. In other words, the lighter vehicles that we have armored up today have some advantages and the MRAP vehicle also has some advantages, but they all can't do the same mission.

So it seems to me that what we ought to be looking at beyond today, beyond today's hearing, is a vision for where we need to go with armored vehicles and the various types of missions that we expect our warfighters to carry out with them.

Mr. TAYLOR. The Chairman thanks the gentleman from New Jersey.

We are fortunate to have a very distinguished panel of witnesses with us today, and I mean that. We are also lucky to have you gentlemen working for our Nation. I hope you understand that.

First is the Honorable John Young, the Under Secretary of Defense for Acquisition, Technology and Logistics and the Director of the MRAP Task Force. Second is Mr. Bill Greenwalt, Deputy Under Secretary of Defense for Industrial Policy. Third is Captain "Red" Hoover, United States Navy, Commanding Officer, Space and Naval Warfare Systems Center, pronounced SPAWAR, Charleston, South Carolina.

Mr. Young, we have about 10 minutes before we have to go for these votes. It is going to be three votes. That is going to kill about a half an hour, I regret to say. So I will leave it up to you. If you

would like to get started, we can do that. If you prefer to wait, we can do that, too.

STATEMENT OF HON. JOHN J. YOUNG, JR., ACTING UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS, DIRECTOR, MRAP TASK FORCE; BILL GREENWALT, DEPUTY UNDER SECRETARY OF DEFENSE FOR INDUSTRIAL POLICY; AND CAPTAIN CLOYES R. "RED" HOOVER, COMMANDING OFFICER, SPACE AND NAVAL WARFARE SYSTEMS CENTER (SPAWAR) CHARLESTON, U.S. NAVY

Secretary YOUNG. Mr. Chairman, I will make a brief opening statement, probably well less than 10 minutes; and then proceed as you will.

Mr. TAYLOR. The Chair recognizes the Under Secretary of Defense.

Secretary YOUNG. Chairman Taylor, Chairman Abercrombie, Ranking Members Bartlett and Saxton and distinguished members of the subcommittees, thank you for the opportunity to discuss the Mine Resistant Ambush Protected vehicle program with you again. I will try to be brief while highlighting a few key points.

Since I was last here, Secretary Gates has continued to push the Department to build and deliver the maximum number of MRAPs possible this year. In response, the MRAP team has labored tirelessly to move forward aggressively while ensuring the quality and effectiveness of these vehicles in theater.

The Congress has truly been integral in our MRAP efforts. The Congress moved the MRAP reprogramming in days, provided $5.2 billion in a continuing resolution, and has included $11.2 billion in the fiscal year 2008 defense appropriations conference report. These are unprecedented actions. With these funds, we are making significant progress in delivery and production of MRAPs.

In December of 2006, we had the industrial capacity to build less than 10 MRAP vehicles per month. We produced 161 vehicles in July. Between October 1st and November 4th, we have taken delivery of about 550 vehicles. We are closing in on our goal of producing roughly 1,100 MRAPs per month by the end of the calendar year. In doing so, the defense industrial base is displaying remarkable agility and exceeding commercial industrial standards.

For example, I am told that Toyota took three years from concept to manufacturing to reach a rate of 2,000 vehicles per month for the Prius hybrid vehicle. Our industry partners are leaning forward to accelerate deliveries, and the men and women serving this Nation are counting on their continued success.

The MRAP program is perhaps the most significant rapid acquisition program the Department has conducted since the end of World War II; and, as a result, we are constantly confronted with new challenges.

If we execute our plans, we will build over 15,000 MRAPs by October of 2008. With each challenge, the Department has proved to have the agility to adapt and react. The dedicated MRAP team has worked to address the availability of steel, tires, axles, transportation to theater and within theater, government-furnished equipment installation, spare parts, maintenance, operator training, and

all the other issues necessary for the program to deliver reliable, safe, and survivable vehicles.

Our unprecedented journey will inevitably include challenges we cannot foresee today, but everyone is committed to fielding these vehicles on time. We know our warfighters are counting on us.

I want to recognize and thank all the members of the MRAP enterprise, starting with Paul Mann of the joint MRAP program office and his team, General Brogan and the Marine Corps Systems Command, the vehicle manufacturers and their raw material and subcomponent suppliers, the men and women of Space and Naval Warfare Systems Center in Charleston, the entire network of transportation professionals represented by U.S. Transportation Command, the vast network of logistics experts from the Pentagon to Iraq and the talented military and civilian staff in the services and the Office of the Secretary of Defense involved with this program.

Finally, I would again like to thank you and the other Members of Congress and their staffs for your clear and unambiguous support for this vital program. Together, we should be able to increase and maintain a high level of production, fielding, and sustainment of these vehicles and provide them to our soldiers, sailors, airmen and marines.

Thank you for your time and attention, and I look forward to your questions.

Mr. TAYLOR. Thank you, Secretary Young.

[The joint prepared statement of Secretary Young, Mr. Greenwalt and Captain Hoover can be found in the Appendix on page 57.]

Mr. TAYLOR. Will there be any other members of your panel speaking?

Mr. GREENWALT. No, sir.

Mr. TAYLOR. Secretary Young, thank you again for being here; and I do value your service and each of the panelists' service to our Nation.

My frustration comes in that it was about two years ago when a former head of the Army Liaison Office came to me, Colonel Littig, and said that we need to be doing better, that the South Africans came up with a vehicle 20 years ago to deflect mine blasts and the Russians came up with it in approximately the same time line and then here we were two years into a very, very—conflict in Iraq where people were dying on a daily basis and we as a Nation had not responded.

Like everyone else in this room, I am pleased that finally we are getting into line, but I am still not convinced that we are doing everything that we can do. Like I said, I was able to visit a facility in Charleston last week. I was able to go to SPAWARs. In both instances I saw people who were working hard, and I know the difference between people going through the motions and people working hard. These guys were working hard and these ladies were working hard. There was a lot of good equipment on those production lines, and I would invite each of the members of the committee to visit not only that plant but the other plants.

But, as somebody who came from manufacturing, what I did not see was that process being done in the most expeditious manner. Congressman Abercrombie touched on it, and he raised an excellent point. Why are there 24 different variants? Not that long ago,

a former Secretary of the Navy came before the committee and talked about the need to build ships or build anything, airplanes, in series. When we are trying to rush something to the theater so that people don't lose their life or their limbs, what in the heck are we doing coming up with 24 variants? Part of me says that somebody is trying to do this on the cheap. Why don't we just build the best variant and make it available and those people that don't need all of those features just don't use them?

I will use the example that I tend to buy common cars. I have an old Chevy Malibu. It has the same wiring harness as if I had bought every nice option for that vehicle, because the folks at GM know that it is cheaper to buy a whole lot of one thing and run it through the factory and if you need those additional wires for things then they are there. Why are we coming up with the equivalent of 24 different wiring harnesses and why are we coming up with so many different shapes?

Believe me, I very much appreciate and I want the American people to appreciate the difficulty of your task. I could very quickly understand the importance of a V-bottom to deflect the blast. I did not see the importance—and I appreciate you folks walking me through the importance—of getting rid of the fuel tanks. Because it makes no difference if you survive the blast only to incinerate the crew inside.

So you have got some challenges. I want to walk this committee through those challenges. But there are simple manufacturing processes that I don't see in place that need to be in place.

And, again, I have got to believe that it is very difficult to hire somebody and tell them this is just to get a job done. This isn't forever. This is a task that is going to be for one year. That is just the way it is. This is a rescue mission for 168,000 Americans in Iraq and the other 30,000 in Afghanistan. And you know what? People did come down to south Mississippi and New Orleans for one-year jobs cleaning up after Katrina.

This can be done and absolutely has to be done. What I want to hear today is what steps are we going to be taking every day to make that process faster, to make it more efficient? And what do we as a Congress need to do to help you in your job? Because this is not about beating you up. This is about solving a problem.

Secretary YOUNG. Maybe I will offer a few comments, Mr. Chairman, and see if I have addressed your question.

One of the ways—I mentioned we delivered 161 vehicles in July. We did that because we had multiple vendors. And, indeed, we have two categories of variants. The Category 1's carry two operators and four passengers. The Category 2's carry two vehicle operators and eight passengers. So five vendors and most of them have both categories, so you are up to 8 or 10 different types. And then if you have Army and Marine Corps unique installations of those vehicles, a lot of variants.

We took the approach to get vehicles as fast as possible to utilize all the manufacturing capacity that could produce safe vehicles and get that 161. It was with some careful thought that we made a decision with the October orders for which the Congress provided funds in the continuing resolution that we went down to three ven-

dors, two category 1 types and two category 2 types. They are the vehicles with the largest payload.

At that point in time, there were two factors to that. One, those vehicles having the largest payload have the best capacity to carry additional armor and additional equipment; and, two, because we have now moved from July to August, September and October, those vendors can now keep and build toward that rate and satisfy the desire to build 1,100, 1,200 vehicles a month.

So we believe this is the fastest path to the most vehicles at rate and to address the issues you are properly raising. Those were exactly our choices in making that decision, is if we reduce the number of variety of vehicles we can process them through the SPAWAR installation process of government-furnished equipment faster, get them to the field faster and reduce the burden on the troops in the field of having different vehicles, each with some different installation which might have to be repaired. They have a job to do, and it is not to work on these vehicles.

So we are making choices to get there; and it also addresses Chairman Abercrombie's point as we studied this and make the decision, if we make this choice now, our long-term inventory at end, the 15,000, will be mostly of single types of vehicles that have large payload capacities and can potentially serve us in the long term.

So we tried to address the short-term demand to get as many vehicles as fast as possible if they provided better protection than uparmored Humvees. We did that. We are now narrowing the scope to continue to build as fast as possible but deliver a smaller set of variants so that they can be more easily outfitted in Charleston and more easily supported in theater.

Those are the two strategies that we have addressed to address both of your concerns, Mr. Chairman.

Mr. TAYLOR. Mr. Young, again, as I mentioned, we have three votes. We will try to get through them as quickly as possible.

The committee is going to declare a 30-minute recess. We will be back at five minutes after the hour. Thank you.

[Recess.]

Mr. TAYLOR. The hearing will come to order again. We want to again thank our witnesses for being here.

Secretary Young, I want to open this up to you, either you or the Captain. It is obviously a frustration to a number of us that we are delivering these vehicles one at a time, that we are putting several of them on an airplane. I think all of us would much prefer to see shiploads of these vehicles being delivered to ports in Kuwait or coming down from Turkey. And one of the things that I feel is a part of this jam is what is going on in SPAWARS.

I, for one, am frustrated that we have 24 different variants, and I am curious as to why we are doing that. I am also frustrated—Captain, I want to give you an opportunity to comment on this—that when you have 24 different variants, that means in many instances different brackets, different holes that have to be drilled through high-tempered steel, just a lot of things that are done on a custom, one-by-one, very slow basis, when we have a problem that needs a mass production answer.

I am told by Retired Colonel Roach, and my observation in Northrop Grumman Shipbuilding in Ingalls is that government-fur-

nished, very high-tech, very classified equipment is installed on those destroyers, on those fighters, at the manufacturer. I am curious, why, on a program where we really need to be moving—as a former Chief of Naval Operations (CNO) said, at the speed of light—why we are building the vehicle in one place, shipping it to another, then adding the government-furnished equipment. And in some instances, I have got to admit it, it kind of reminded me of the middle of the night before Christmas assembling my kids' toys, someone looking at a manual and walking over to the vehicle.

Again, we need to be doing better than that.

So why don't you walk the committee through why we are doing this, why so many variants, and what can we do to move this along faster.

Secretary YOUNG. Maybe I could start and let the Captain add to it; and this gives me an opportunity to continue part of the answer I offered before.

We have, I want to assure you, made a pretty determined effort to create common equipment installations for these vehicles. And there is a common turret; the Army and Marine Corps agreed to install the same turret on these vehicles. Both services will have Blue Force Tracker; both services are using the same radio racks; and for a period of time we had an agreement to install the same intervehicle intercom system or radio system. But then the Army came back through the Vice Chief of Staff of the Army and said, Army soldiers are trained on their particular system; it is in all their other vehicles. The common decision was to go with the Marine Corps system. The Army was very worried about having to do differential training for their soldiers in the field and their next-to-deploy, and they said, can we please go back.

So I am pushing as hard as I can to get common to ease installation issues at SPAWAR, but at the end of the day I have to respect the senior military leaders' decision that says certain things have to be unique.

And another piece of uniqueness is the jammers. The Marine Corps has a different operating concept in theater, and so it is currently using a different jammer than the Army is. That is a significant difference, because the differences between those two jammers are substantial in size, weight, and power. That forces another different install.

If we get to the new Joint IED defeat organization CREW 2 jammer, which will be common between the Army and Marine Corps, we will be able to ease that problem.

So all of these are those challenges. We are confronting them, we are dealing with them as fast as we can.

To your specific question about installation, the jammers and other things create circumstances—I only want to go so far in the open hearing, and would be happy to talk to you more, but there are a lot of radio emissions from this vehicle. And so SPAWAR is, I think I would say, uniquely qualified from a facility point of view and all to install this equipment, test it on a range, make sure there are not interferences, make sure the radio patterns that are produced by the vehicle are sufficient for all the purposes desired, and move forward.

Every manufacturer doesn't have that kind of facility, and so you would find yourself shipping vehicles from a manufacturer where the equipment is installed; test it; if it doesn't work, ship it back; and other things.

So I believe there are some significant efficiencies to massing the government furnished equipment (GFE) at SPAWAR, having people that have installed GFE in one vehicle install it in the next vehicle and the next vehicle. Even though the vehicle is somewhat different, it doesn't involve differential training.

But to assure you of the next step, the team is making those choices every day. They look at what could be done at the vendor, and they are pushing things back to vendors that can be done at the manufacturing site and, I believe legitimately, only trying to do the things at SPAWAR that they feel they have to do, or that are most efficiently done there because one person can install all the jammers, all the radios, all the other things.

Let me please give the Captain a chance to add to that.

Mr. TAYLOR. Captain Hoover.

Captain HOOVER. Yes, sir. To add to the part about commonality. We are already seeing successes every day in the improvements of, the commonality of the various different vehicles and the systems we are putting in. Our role, obviously, is in the area of electronic engineering and integration, and that is what we specialize in, in our expertise in the testing and understanding of putting complicated systems together in a small, confined area.

The biggest challenge that we have had to the different configurations was doing the prototyping and getting through those processes for all the different configurations.

The good side of where we are at today is, we have completed a large number, especially a large volume of the vehicles that we are going to be seeing; and so now—as a matter of fact, every day—we are seeing a marked improvement on the speed of that integration getting to those vehicles.

We still have challenges in working through those with a very good teaming arrangement with our manufacturers. We have recently seen a large number of engineering changes that we have put changes back for brackets and those sorts of things, and cable penetrations for the manufacturers—for those, to do those in line with their processes, so that we can improve the speed that we can do the electronic integration.

We have also had, working with a large group of industrial engineers, to come in and look at our processes, seeing what else we can do. And, again, that is a daily review, looking for opportunities to continually improve.

And so the continual process, improvement, the engineering changes back to the manufacturers. And then the learning curve from now that we are through the biggest bulk of the prototyping that we will see every day. Again, every day, our numbers of production of doing the electronic integration are improving.

Mr. TAYLOR. Captain, as a quick follow-up, and Secretary Young touched on this: I very much appreciate the challenges of the need for interoperability of the different electronic components; and the folks that work with you did a very good job for talking about the need for stand-off distances. But once you have made the deter-

mination that this is where this antenna needs to go, this is where the jammer needs to go, why not send that work back to the factory?

It is my understanding that in the fall of 1989, Charleston was hit with a very significant hurricane. It is also my understanding that sometime in the history of that city they have had a very dramatic earthquake there and that people in the Charleston area still worry about that sort of thing.

Does it really make sense to have that as one focal point where five or six manufacturers all send their equipment to be put together? Doesn't that become a vulnerability? And what are we doing? Since, again, I recognize that vulnerability, I would hope you would.

So what are we doing to spread the work and to get this—and, again, the whole idea is to get it done right and to get it done quickly.

Captain HOOVER. Sir, as far as the natural disaster from the Charleston area, we have another alternate facility about 60, 70 miles outside of Charleston in a different part of the State, the same square footage size, the same type of industrial capability from an electronic integration-type facility. So that is what we have in place.

And we are putting right now—between now and Christmas, we will have in place an additional capacity for another 305 lines, actually above what our current plan was of the 50 lines that we have already told folks about. And that will be additional capacity and a backup plan if there ever was a natural disaster, with a 72-hour plan to be able to relocate to another continuing operations-type facility.

Mr. TAYLOR. The Chair will yield to the gentleman from Maryland, Mr. Bartlett.

Mr. BARTLETT. Thank you very much.

How many MRAPs will be in theater by year's end?

Secretary YOUNG. Mr. Chairman, I believe in a previous press conference, Secretary Gates indicated that he thought there would be at least 1,500 in theater. I think we will do much better than that, but I would really rather not predict at this time.

But our production schedule calls for us to produce—for industry to build and deliver almost 3,600 MRAPs by December 31.

I think Chairman Taylor rightly pointed out that if SPAWAR is very successful, and they have plans and they have applied Lean Six Sigma processes to it, that they can process those vehicles. Then you have to factor in the shipment times and some variability in the vessels.

So I have been very hesitant to put a final number. I think it is significantly more than that 1,500, but if need be, we could get you something for the record that we would be, I think, conservative and comfortable with until we get closer to December.

Because the other thing is, I have to build 1,000 vehicles in November and 1,200 vehicles in December. That is the real goal. Having built 500 in the last month, we are optimistic about that, but I am very dependent on my industry partners to be able to make the next jump from 500 to 1,000 and then to 1,200.

That is critical before I can answer your question as to how many will be in theater.

Mr. BARTLETT. It will be somewhere between the 1,500 and the 3,600?

Secretary YOUNG. That is probably a good estimate.

Mr. BARTLETT. Thank you very much.

Acknowledging the significant work that has been done to produce MRAPs, how are you dealing with the variation that you find when the trucks arrive in Charleston that are not ready for integration?

Secretary YOUNG. Maybe I would ask Captain Hoover. He would be best able.

Captain HOOVER. Yes, sir. That has been a very good teaming arrangement between DCMA, the vendors. We have field service reps from each of the vendors right in Charleston working with us. And in almost all cases we are able to get the prototyping done, we can get the integration done in a parallel process, working with the manufacturers to get the vehicles done in a short amount of time.

Mr. BARTLETT. Are they not inspected before they are shipped? Or what is the problem that they arrive not ready for integration?

Captain HOOVER. Yes, sir, they are inspected. It is not a problem.

It is basically that some of the vehicles were awaiting some components, for some of the equipment like an air conditioning unit or whatever. And so, due to the speed that we are trying to go and paralleling our processes, we go ahead and conditionally accept the vehicles. And then, again, the field service reps come and work alongside our folks in our facilities so that we can work together in a teaming arrangement so that we can complete the vehicles.

Mr. BARTLETT. Is there anything that we can do to help?

Captain HOOVER. Continuing to support our efforts on what we are doing I think is a great thing.

Mr. BARTLETT. Mr. Taylor asked the next question I was going to ask, and that is, why can't you have the C4I equipment installation done at the manufacturers and avoid this additional step?

And I think that you answered that question.

Is SPAWAR Charleston opening an MRAP integration facility in Orangeburg, South Carolina?

Captain HOOVER. Sir, in Orangeburg, South Carolina, is where we have our continuing operations facility that we have put in place. Again, it is similar, as far as capacity, to the building that we are using now. And it is meant to be the emergency backup facility if there was a natural disaster.

But also what we are doing in order to make that run as smoothly and efficiently as possible, if we ever need to call upon it, we are putting a limited number of lines over into that facility. The other benefit of that is, it gives some additional capacity above what we currently have.

Mr. BARTLETT. Mr. Chairman, I have an obvious question to ask. If we were really wanting to get MRAPs as quickly as possible and if we have this fallback facility that we could use in the event that we lost the primary one due to a natural disaster, why aren't we using both of them so we are producing more vehicles?

Captain HOOVER. Yes, sir. That is the plan. Right now, the other important portion of the location of the facility that we are using

now is the closeness to the testing, the electronic testing that we need to do, only a couple miles away. And now that is part of the prototyping; it is also part of the engineering change process that we need to do for the electronic testing.

As we get over the major hurdles in the completion of all that testing, then we will be able to do more, basically, at a more remote site away from the testing facility.

Mr. BARTLETT. Is it a manpower shortage that prohibits you from manufacturing at both facilities now?

Captain HOOVER. No, sir.

Mr. BARTLETT. I am just curious. We have a fallback location that we could ramp up very quickly in the event we lost the primary one. If we really want to get MRAPs in the field very quickly, I think the obvious question is, why aren't we using both of them now?

Captain HOOVER. Yes, sir. Again, it is just the time it is taking us to get the other facility up and running and ready to go, and also where we are at in the prototyping process and the maturity of the process.

Mr. BARTLETT. I am still not getting a clear understanding of what keeps us from doing it.

Secretary YOUNG. Congressman, maybe I might add a couple of comments to that.

One, we are anxious about some of the issues you all are raising. I asked recently that the Army look, given its experience in handling up-armored Humvees and kitting them with Frag Kits, to look at what facilities they have and whether they could participate in the MRAP program GFE equipment installation.

So they are taking a look at that, and I am waiting for an answer about that, because I would see them as either a backup facility or a potential augmentation to the current capacity.

SPAWARS's estimates say that at the single Charleston facility they can process the full vehicle rate of 1,200 per month. I think we all have—you know, this is one of the risk areas and a continuing learning experience. We need industry to deliver 1,200. Then we need to see SPAWARS progress 1,200. They are making very good process and have demonstrated the ability to process as many as 20 a day right now, I think.

So it is not clear to us SPAWARS won't be able to handle the workload, but we are looking at options for backup, either through the alternate SPAWARS facility and/or Army facilities.

Mr. BARTLETT. Thank you, Mr. Chairman.

Mr. TAYLOR. Captain, if I could follow up, I heard this comment last Friday and I heard you say it again today when you talked about 50 different production lines. My observations were that there were, indeed, 50 lines, but it looked more like 50 different custom, one-of-a-kind events going on, as opposed to even one straight production line where, at this station, this is done; at the next station, the antenna is added; at the next station, the weapons are added.

Truly—and, again, I very much respect your service to our Nation, but I don't think we are going to get anywhere near the results that this Nation needs with the situation that exists at SPAWARS.

And I was curious, to what extent have you gone out to the private sector, to folks who work at Toyota, Ford, GM, whoever, folks who are in the business of mass production? You are in the business of being a great sailor, and I understand that we have asked you to do something on top of your normal role. But to what extent have you tried to involve industry experts to expedite this process?

Because I am not saying this to belittle the efforts of anyone in your organization. I am saying this because kids are dying in Iraq for lack of these vehicles, and we need to do better. Tell me how you are going to do better.

Captain HOOVER. Yes, sir. We have teamed with a large group of outside industrial experts.

Mr. TAYLOR. Walk us through this. This is a chance for this committee to learn something.

Captain HOOVER. Yes, sir.

George Group, for one, who are experts in the Lean Six Sigma processes, understands industrial engineering processes, have teamed with them, have come in and are continually observing our processes.

We also have local resident experts in the area of Lean Six Sigma and process engineering.

And so that is a daily effort, to look through our processes, to look for that continual improvement. And, again, there are numerous examples on where we have had those improvements in the tooling areas, in measuring the drumbeat, the rate of the vehicles going through those efforts.

Also, working with the manufacturers on those engineering changes and working with their team, their team of engineers, on—already putting more of the brackets and the drilling and the welding and those sort of things back into the inline process of the building of the vehicles.

Mr. TAYLOR. Are you certain that when, on the industrial side, on the manufacturing side, they get to full production, that you have the people, the equipment, and the process in place to match their production so as to field these so that every time one rolls into Charleston, you are ready to take it, and within a day or two it is going out to the field?

Captain HOOVER. Yes, sir.

Mr. TAYLOR. You have everything you need? If you come back before this committee in March, are you going to tell me that you don't need any additional equipment, you don't need any additional resources, you don't need any additional people? Because now is the time to clear the air on this.

Captain HOOVER. We have the people and the resources. We need to continue the teaming relationship; and we need a tight, close, working relationship effort with the manufacturers, obviously, for us all to be successful.

That is a very important team, and I fully expect that that will continue and only continue to improve.

Mr. TAYLOR. The Chair recognizes the gentleman from Texas, Mr. Ortiz.

Mr. ORTIZ. Thank you, Mr. Chairman.

Secretary Young, thank you for being with us today—all three of you.

As chairman of the Readiness Subcommittee, we want to be sure that our troops get the best equipment that we can give them. And I understand that the MRAP contains some of the newest, latest technology. But I see a chess game. We move, they move. We come up with a new technology or new equipment, then they come up with different ways to destroy our equipment.

I am pretty sure that as we are moving along and we are using the MRAPs—and I know that there have been some attacks on some of the MRAPs and, thank God, that some of our Marines and soldiers have been able to walk away and not to be maimed or injured like before. But the enemy has always been able to adapt real quick.

Can we avoid that? As we are learning from experiences with the MRAP there, are we telling our engineers, do they know exactly what happens? How can we provide the information learned from these experiences so that we can—because we are providing the same vehicle all the time. It defeats the purpose. We need to make adjustments as we move along. And maybe you can give me a little insight on that.

Secretary YOUNG. Congressman, probably a couple important points to that.

One, the MRAP team has a competition under way for an MRAP 2 vehicle, giving people—to provide vehicle options against a higher standard of protection.

Then I think you would be encouraged to hear that we are testing the existing MRAPs against that higher standard, and that testing is informing the team and leading people to make changes on some of these vehicles. So the next orders of vehicles will potentially have changes that will make them more like this MRAP 2 standard we would like to achieve.

And so we are constantly testing and providing that data. And then we get information from the field, as you said, and we have the opportunity to make changes to the vehicles.

I would tell you, as General Brogan told me just during the break in the hearing, the second series of development testing on the existing MRAPs is going very well and showing that these vehicles are very capable.

In addition to that process, we are working with the supplemental funds that you all have provided to add additional armor protection to those vehicles, to pace some of the threat we see in the theater.

So we are taking all those steps, and we will probably provide you with additional details in a different forum.

Mr. ORTIZ. You know, we read in the newspaper about individuals saying, well, we might be able to use it here in this type of terrain. But if we go someplace else, we might not be able to use it. But I am pretty sure that as we move along, we will be able to make some changes to where, if we fight—and I hope that it never happens that we have to fight a different war, different techniques—that maybe we can continue to use some of these vehicles.

Secretary YOUNG. Maybe I would add a couple of additional comments to that.

I mean, the vehicles have good survivability because of the features that Chairman Taylor mentioned and, also, they are heavy.

They range from 30,000-plus pounds to 80,000 pounds at the extreme end. That gives them some of the survivability also.

That also deters to some degree their mobility and their speed, and in certain terrain environments MRAPs are proving not as effective for soldiers. And we are getting reports from the field that some places they want to keep the up-armored Humvees. They need those for mobility and speed and other factors.

So the force is going to keep informing us about what best lets them do their mission, and we will work toward that. And then out of both of these programs, we are pulling knowledge—I think it goes to Chairman Abercrombie's comment—we are going to build a replacement for the Humvee. We call it the Joint Lightweight Tactical Vehicle.

I recently urged that we look at building prototypes of those vehicles and testing to see how survivable we can make those vehicles. There is a desire for those vehicles to be small and light and mobile like Humvees, but have MRAP-like protection. Well, those are inconsistent goals, but with some technology and design work, maybe we can get part of that. We need to build prototypes, test them, and see how close we can come; let that inform the requirement. And if any vehicles are successful, we will move forward with developing those vehicles to have a Humvee replacement.

So it is constantly improving the MRAPs. We will continue. There is a Frag Kit 6 now for Humvees. We will keep gathering information, test in the theater and make improvements on what we have.

And then we are looking forward to the next generation of vehicle.

Mr. ORTIZ. Thank you, Mr. Chairman.

Mr. TAYLOR. The Chair thanks the gentleman from Texas.

The Chair now recognizes the gentleman from Hawaii, Mr. Abercrombie.

Mr. ABERCROMBIE. Thank you, Mr. Chairman.

Let me work backwards, Mr. Young. You just mentioned the question of prototypes, which takes me to a—some of the area that I don't want to go into at great length today, because I don't think the hearing warrants it.

But you have a unique background. I won't go over all of your biography, but for those in the audience and those listening in or paying attention to this today, they may not be fully aware of it. You have, I think, a unique and very useful background in the sense of having worked on the Defense Appropriations Committee.

Your familiarity with acquisition comes from both an academic background and familiarity with the engineering side of things, as well as the political side of things. And I don't mean that in a pejorative sense. I am talking about the process that is necessary, particularly from an appropriations point of view; you are familiar with the history, the legislative history.

So when you mentioned the prototype, I think—if you are not aware, you will be at the end of my remarks that I am very much in favor of what you are trying to achieve because I think it makes good sense. That is why I wasn't quite sure what you meant when you said that someone might, with regard to Humvee replacement

and the Joint Lightweight Tactical Vehicle, that the prototype might be seen by some as looking at inconsistent goals.

Could you enlighten me? Or did I misunderstand what you were trying to get at? I do not see, in other words, the establishment of a prototype process as being inconsistent with anything other than good fiscal—sound fiscal policy and sound legislative policy with regard to what we should fund and how we should do it.

Secretary YOUNG. Mr. Chairman, I am very grateful for your comments. I think what you sensed in my comments is, the Department had embarked on a strategy that said we would like to have a competition, pick someone based on a paper proposal to build a vehicle to replace the Humvee, and have that vehicle cost half or less of what MRAP cost and be more survivable or as survivable as an MRAP.

I said, I am not sure technology supports that. Even if it does, I think, consistent with your comments, I, as the acting under secretary, said it is a better strategy, given the times we have gone into later stages of development with immature technology, to do prototyping work and convince ourselves that technology will support and meet the requirement and we understand about what it will cost, and then move into that later stage of development to try to avoid schedule slips, cost growth, and the other bad things.

So across the Department, I am urging we look very hard at applying prototyping strategies, which I am actually very glad to hear that might be consistent with your view.

Mr. ABERCROMBIE. Too bad I am not a Senator that can confirm you.

Secretary YOUNG. I would agree with that also, sir.

Mr. ABERCROMBIE. But I have an idea that anybody in the listening public, listening to what you are saying, would be a little bit shocked and maybe a little perturbed that that is not what we are doing right now.

The assumption, I expect, particularly in the private sector, would be, let alone in the taxpaying public, would be, isn't that the way we do things anyway? And, of course, the answer is "no." So what you are really talking about here, are you not, is a change of culture.

Secretary YOUNG. Yes, sir.

Mr. ABERCROMBIE. A change in approach?

Secretary YOUNG. Yes, sir.

Mr. ABERCROMBIE. That is more than tinkering with the process. It is an entirely different concept of what constitutes the capacity to utilize—even create technology, let alone utilize technology, on behalf of the national security mission.

Secretary YOUNG. Maybe I could add more.

What I particularly want to do is, I want to learn lessons and make mistakes. Because we do have to learn, especially in technically risky things. I want to learn those lessons and make those mistakes when I am spending at lower monthly rates of taxpayer dollars' expenditure in a prototyping phase, and hopefully, not learn those lessons when I am spending money at much higher rates in the very costly design and development phase.

Mr. ABERCROMBIE. Not only that. But you are also dealing with the context of the military industrial complex. And, again, I don't

use that in the pejorative sense. I use that in the sense of the warning that was issued by President Eisenhower at the end of his term.

As someone who understood, as much as he helped create, the military-industrial complex, he understood that there were consequences and implications of it. There are sound reasons for that, right?

And that is why I said, it is not pejorative on my part. It is too easy a philosophical or ideological position to take.

But the reason I want to just pursue it a moment or two more in this context of the MRAP. We don't want to be in a situation, whether it is MRAP or anything else you may be contemplating, what these subcommittees will have to deal with.

Hasn't part of our difficulty been that we hand out these contracts, have a goal on a piece of paper, and then say, okay, you go try to accomplish this? And what happens is, we start spending not thousands or millions but sometimes billions of dollars. You then create—and Mr. Taylor made it very clear, this is not a jobs program we are looking at here. Some jobs will come, some jobs might. They might be in some districts, they might not be in others. They might change.

I have had discussions with some of the people on our second panel, for example, saying, are you prepared, do you understand that you may gear up to a very high percentage of turnout—build-up and overhead both in terms of personnel and investment—which may have a termination point, which may have some kind of serious consequences for you financially? That is one of the reasons that I am so interested in the question of capital budgeting and so on.

But in this instance, then what happens—this is my understanding of what you are driving at here—is that you then get a vested political interest in continuing what is going on. And it is hard, and I have full understanding of any Member's situation when somebody comes and says, look, Congressman, look, Senator, we have got 1,000 jobs here and this investment is going.

Of course, nothing is being accomplished. We are not really getting the helicopters, we are not really getting the planes, we are not really getting the tanks. We think we are. Maybe we will. Or we have got to slip it another four years or five years, but you have got to keep giving us the money.

And then what happens is that the capacity to do what we are talking about right now, this rescue mission that Mr. Taylor is speaking of, is compromised. And it finds itself in extraordinary difficulty or requires us then to move very rapidly in another direction in terms of funding which, more often than not, will involve a supplemental budget because we didn't anticipate it during the regular budget process.

Am I being unfair in characterizing this?

Secretary YOUNG. It is very fair.

Mr. ABERCROMBIE. And if I am not, am I correct in saying that you want to try and change that, that kind of doing business?

Secretary YOUNG. Yes, sir.

Mr. ABERCROMBIE. Okay. Does that then apply toward the MRAP 2?

Secretary YOUNG. I think most aspects of MRAP are aligned with some of the things we are talking about.

They asked multiple vendors to bring vehicles to test in the first phase of MRAP. And, indeed, we leaned forward and bought vehicles from some of those vendors, and one or two of those vendors didn't pass the testing. And we have some of their vehicles——

Mr. ABERCROMBIE. And that's the way it is.

Secretary YOUNG [continuing]. We are going to use for training purposes so the taxpayer money is not wasted. But they are not going to get more contracts.

Mr. ABERCROMBIE. So if Members of Congress are serious about wanting to limit government and wanting to spend the dollar in the correct way, of wanting to utilize, we are going to have to rely on some cold, hard judgments being made; and that means some of us may have to say to our people, we don't get this, maybe we will get something else. We will have to move in another direction, as Mr. Taylor already indicated.

More than one of us have been through a situation where you told 1,300 people or whatever it is, this is not going to happen any longer. So, okay. So we are going to get rid of that jobs approach here, per se.

Then the last question I have—thank you, Mr. Chairman, for allowing it—we are getting lessons. You are talking about, like, the 24 variations and so on. Without taking a whole lot of time, maybe, that would be better spent in another hearing, is it fair for me to say, or do you have then a kind of lessons-learned concept or approach with regard to your experience now with this singular focus on MRAPs and the congressional push that is going on with it in the sense of applying lessons in terms of the survivability?

Are you testing out in the field? That is what I am trying to get at. Are we following up? Do I understand you correctly that we are following up in the field, asking for the soldiers in the field to give us information as to whether or not what we are giving them actually is accomplishing what they need?

Or because I gleaned from what you were saying, in some instances, a lighter vehicle, maybe not quite as armored, is something that is seen as useful and applicable; and in other instances, they are going to need something else.

Secretary YOUNG. We are looking for that feedback. For the MRAP program, per se, there has been a first round in development tests; a second round which four of the vehicle vendors are still in the process of.

Mr. ABERCROMBIE. I am not talking about testing in a field sense. I am talking about testing in a theater sense.

Secretary YOUNG. Right. I wanted to, if I could, gradually work my way there.

There is a third round. Those development tests are defined by what we are seeing in the theater in terms of explosive types and other things.

And then the actual results and experience in the theater, we get that data and process that, both to define our tests and to learn what we need to do about vehicles going forward.

So, yes, sir, that happens.

Mr. ABERCROMBIE. And, Mr. Greenwalt, you escaped most of the attention today. I presume you are Mr. Young's strong arm or his associate in this? Do you associate yourself with this approach?

Mr. GREENWALT. Yes, sir, I do. And I think it is the lessons learned from this particular procurement: that our industrial base is agile, that we rely on commercial products and commercial vendors, and we have been able to pull together in a very rapid period of time so you can rapidly prototype with existing technologies and existing manufacturers.

And I think——

Mr. ABERCROMBIE. I think the country and the Department will be well served, Mr. Young, if you are able to move forward with this.

Thank you, Mr. Chairman.

Mr. TAYLOR. The Chair thanks the gentleman from Hawaii.

We now recognize the gentleman from South Carolina, Mr. Wilson.

Mr. WILSON. Thank you, Mr. Chairman.

And thank all of you for being here today. I am so interested in the MRAP program. And I am interested as a Member of Congress. I am a veteran myself, but I am particularly interested in that I have four sons serving in the military. One served for a year in Iraq, another is on his way to Iraq, and so I am interested for our troops. And so much of the feelings that I have are to provide the best equipment we can to protect our troops. And what you are doing is so important; and I want to thank you for your efforts.

In particular, I have had the opportunity, thanks to Congressman Abercrombie, to recently be in Iraq and Afghanistan. My National Guard unit is in Afghanistan. In my visits—eight times to Iraq, four times to Afghanistan—as he was talking with persons in theater to find out how successful and how helpful the equipment that our young servicemen and -women have, it is just really heartwarming. And so you are making such a difference.

Also, Captain Hoover, I want to thank you. I have had the opportunity to visit SPAWAR. You have excellent personnel. They are so enthusiastic.

And, of course, I am a bit partial. The chairman has had two daughters go to the College of Charleston. I had the extraordinary opportunity to be born in Charleston. So I am very pleased about what you all are doing.

As we look ahead, I am very interested in finding out, what is the planning for long-term sustainment of the MRAP program? And any of you could answer that.

Secretary YOUNG. Congressman, I think, unfortunately, none of us is exactly the right person to answer that question. The service chiefs have indicated and Secretary Gates has asked them to think about that very issue: How will you, long term, integrate MRAPs in the force structure? And I think those deliberations have not concluded yet.

In general, the chiefs have indicated these are heavy and large vehicles, and for some of their operational concepts—very expeditionary, mobile—they don't fit well. They fit very well, obviously, for the circumstances in Iraq. So some of the vehicles, the service chiefs have indicated, will be stored for a period of time.

We might not need as many as we are buying for the Iraq situation if we are successful in continuing to stabilize Iraq and the force mission changes there. But those decisions are being deliberated on and made as we talk; and Secretary Gates is working on it.

I can't give you much more commentary than what I have offered.

Mr. WILSON. Mr. Abercrombie touched on this, too. And that is, when do you require another influx of funds in order to preclude a possible production break in the MRAP program?

Secretary YOUNG. The funds that I understand are in the fiscal year 2008 Defense Appropriations conference report that is before, I believe, the Congress—today, even—give us what we need for fiscal year 2008, which is really, to be candid, awesome and incredible. In a matter of months here, the Congress has provided $22 billion to buy these vehicles. It is far and away the biggest program activity in a space of time in the Department. So the Congress has been extraordinarily helpful on this program.

Mr. WILSON. And, again—I know I am very supportive of what this can mean to protect our troops.

The final question I have: Are you experiencing any supply problems at the sub-tier supply base?

Mr. GREENWALT. In April and then just recently, a few months back, I tasked the Defense Contract Management Agency to look for potential bottlenecks, and they have identified a number of them. But the most recent report is that these problems are manageable, and that we are able to work our way through them.

But there are potential choke points in steel, in tires, in axles, and a few subcomponents. But, again, these problems are being worked through on a daily basis.

And because the MRAP program has a DX rating, which is essentially the MRAP program obtains priority to all of these components and materials, we are not seeing the supply disruptions that could have occurred.

So I think we are doing—it is a tremendous job that is going on out there by the vendors and by government personnel, and we have got our hands on it.

Mr. WILSON. Again, I want to thank you as a veteran and thank you as a member of a military family. We want the best for our troops, to protect our troops.

And thank you very much, Mr. Chairman.

Mr. TAYLOR. The Chair thanks the gentleman from South Carolina.

We want to thank our witnesses.

We also want to recognize we are lucky to have former Representative Dave Martin with us today, keeping us on our toes.

Captain, last question. I am curious, what was your flow-through SPAWAR in September? How many vehicles? In other words, how long did it take a vehicle to enter your facility, to leave your facility in theater, in September?

How long would it take that same vehicle to flow through your facility today? And what is your anticipated time for January?

Because, again—I hope I am dead wrong; I hope you are exactly right; I hope there is not a train wreck on the way—but I want to

hear from you that you have a plan. And give me an idea how these things are proceeding through your facility quicker, so that we don't have a problem there.

Captain HOOVER. Yes, sir. Right now, I will start with our goal.

Our goal is to get from time of receipt to embarkation in seven days, a seven-day flowing process. I do not recall the exact numbers on average for the month of September. For the end of the month of October, it was roughly 21 days; and the reason for that, the difference—September was a little slower than that. And the reason for the difference and the reason why it is much longer than what we want it to be or require it to be is because in August, September, even up through October, we have been heavily involved in the prototyping process which goes into the average flow rate, the calculation of those numbers. And so when we have a group of vehicles coming in from the manufacturers, as we are going through the prototyping process, which takes us several more days than just doing the integration itself, basically we have vehicles there that are waiting to get into the integration process once the prototyping is done.

Now that we are over the majority of those hurdles and we are over the majority of those prototyping processes, from the raw vehicle number at over 80 percent that now we are seeing—and we are right where we thought we would be at this point, knowing that November was our big month, knowing that we needed to get through most of the prototyping so that when, in November, the largest volume that we have seen to date, starts to flow, we can continue to narrow down that 21-day time.

And it is not 21 days of integration, but that is from the time that it arrives to the time that it departs, basically, to get that down to that 7-day process. And now we are seeing daily an improvement on that speed. And, again, that is due a lot to the successes in getting through the prototyping, working with the manufacturers, and now working on just that continual process improvement to make sure we are making our goals.

Mr. TAYLOR. When do you anticipate your facility will be at that 7-day target?

Captain HOOVER. Sir, by the end of the month of November, we should have the capacity we estimate, that our capability will be at 40 vehicles a day. So it is more that we are tracking it, than the whole entire process, because we are looking more at keeping up with the flow of, the drumbeat of, the number of vehicles processing through. And then, by mid-December is when we believe—we are showing right now that we will be at the full 50-a-day vehicles, which is what we are required to do to keep up with the drumbeat of, the flow of the vehicles—keep pace.

Mr. TAYLOR. I have got to believe that you supply these numbers of what is flowing through your facility to someone on almost a daily basis. Is that correct?

Captain HOOVER. Yes, sir.

Mr. TAYLOR. I would like to request that you also supply those numbers to this committee.

Would you have a problem with that, or would Mr. Young have a problem with that? Okay.

And, again, we very much appreciate all of you.

Yes, Mr. Young.

Secretary YOUNG. Could I just add, every time I brief the Secretary, he shares the concern you have.

I have also visited SPAWAR. They are pacing the vehicles. They have had to deal with the fact that we contracted for new vehicle types that showed up. But this is the metric we want to watch, and this is why it is important for us to have some backup plans, too.

It is of concern to Secretary Gates. And I share your concern; I am happy to share that data with you.

[The information referred to can be found in the Appendix beginning on page 117.]

Mr. TAYLOR. Captain, either you or somebody in your organization last Friday mentioned that you see on the deliveries that come to your facility, that it starts out kind of slow and then toward the end of the month you tend to get a wave of vehicles coming in, which certainly makes it harder on your organization to process them in a straightforward, timely manner. What is being done?

And I am also going to give our vendors an opportunity up front to let them know this is part of their questioning.

What is being done to change that, to get it more balanced out, one-quarter of a month's production in each week coming from your vendors, again, to lessen the load on your people so that it is neither too little nor too much?

Captain HOOVER. Sir, I am only going to speak from what we are seeing in our facility.

In the month of October, we saw an improvement, although at the end of the month of October we did have a bigger bulk at the end of the month, but not as bad as it was in the month of September. Already in the month of November we are seeing marked improvement on a steady flow, almost a daily delivery of vehicles coming through.

So the program office has done a great job on changing that. And we are seeing—again, at our facility, we are already seeing a significant difference. Especially this month right now in just this short month that we have started, we are seeing an improvement in that area.

Secretary YOUNG. Maybe I can add, because that is a challenge for SPAWAR, and in anticipating this, I tried to get that data. In the first 5 days of October, 21 vehicles were delivered. In the last 5 days of October—maybe, actually, 7 days—231 vehicles were delivered. That was a very big wave at the back end.

In the first seven days of November, so far, already 100 vehicles have been delivered from industry. That is a very positive sign. Paul Mann and General Brogan and the MRAP team have tried to move the contracts to be weekly-based deliveries and are even looking at daily-based deliveries.

So we are going to try to force, through the contract, that discipline, and work with the vendors to get to that steadier flow.

Mr. TAYLOR. Thank you, Mr. Secretary.

Any additional questions?

Mr. Secretary, we very much appreciate you and this panel being here. We appreciate your service to our Nation.

And I want to give you one last opportunity. If there is anything you need from this committee, tell us now.

Secretary YOUNG. I have one thing I need, but it is better to talk to you.

Mr. TAYLOR. If you prefer to do it off the record.

But, again, this is a United States of America problem, and we want to do our part. We expect you to do your part. If there is anything this Congress is not doing, we need to know about it.

Secretary YOUNG. Let me not leave you with the wrong impression. If the appropriations bill provides that $11 billion, we have the tools we need. We will have to work some processes in the Department to execute it, and we will do that and move forward.

Mr. TAYLOR. Again, we want to thank the panel for being here. Thank you for your service to our Nation. The first panel is dismissed.

The Chair would now like to welcome before the committee our second panel. We are very fortunate to have a number of representatives from industry, who are involved in the manufacture of the Mine Resistant Ambush Protected Vehicle. They include Ms. Linda Hudson, President of Land & Armaments Systems, BAE Systems; Mr. Gordon McGilton, Chief Executive Officer of Force Protection; Mr. David Heebner, President of General Dynamics Land Systems; and Mr. Archie Massicotte, the President of International Military and Government (IMG), LLC.

We want to welcome you here. It is normally the practice of this committee to limit witnesses to five minutes. I am willing to be flexible on that, but I would hope that you keep in mind that there will be additional votes today. So, in fairness to all of our witnesses, please try to do it as expeditiously as you can, but we are willing to be flexible on the five-minute rule.

The Chair now recognizes Ms. Linda Hudson.

STATEMENT OF LINDA P. HUDSON, PRESIDENT, LAND & ARMAMENTS SYSTEMS, BAE SYSTEMS

Ms. HUDSON. Thank you. Chairman Taylor, Chairman Abercrombie, Ranking Member Bartlett, I appreciate the opportunity to address your committees. Having submitted my statement for the record, I would like to provide a few opening comments.

I appear before you today to discuss the MRAP systems produced by BAE Systems. Before beginning, on behalf of BAE Systems, I would like to thank the subcommittees and this Congress for your support of the MRAP program.

I am the President of BAE Systems Land & Armaments Operating Group. During my 35 years in the defense industry, I have never seen industry and government accomplish so much so fast. My organization has 18,000 employees across 17 States in the United States, as well as the United Kingdom, Sweden, and South Africa. All of my employees and the employees of the greater BAE Systems Corporation have made MRAP our number one priority.

Our global business designs, produces, resets, upgrades, and provides worldwide support for combat vehicles, tactical vehicles, military armaments, naval fire support systems, advanced armor solutions, and individual soldier survivability systems for the United States and our allies. We bring all of those resources to the MRAP program.

Having recently acquired Armor Holdings, we now provide the Family of Medium Tactical Vehicles, or FMTVs, and have played a major role in improving Marine and soldier survivability by up-armoring Humvees and providing advanced body armor on an accelerated schedule to meet the evolving threat. The combination of BAE Systems and Armor Holdings has resulted in unmatched capabilities in warfighter and vehicle survivability. To date, we have received orders for 2,933 MRAP vehicles. Allow me to summarize our three MRAP systems currently under contract.

First, the RG–31 vehicle has been produced since 1996 in our Land Systems South Africa business. Our legacy of building mine-resistant vehicles in South Africa goes back 30 years. We have a business relationship with General Dynamics to allow them to market and coproduce the RG–31. I will defer to my colleague from GD to comment further on this contract.

Second, building upon our RG–31 experience in South Africa, technology was transferred to our ground systems business here in the United States, and a next-generation mine-resistant vehicle called the RG–33 was developed by BAE Systems. This design incorporates unprecedented survivability features tailored for our U.S. forces. The RG–33 is currently being supplied in four different variants, including the generic Category I and II systems, and an ambulance and a SOCOM variant. The contracted production currently under way runs through April of 2008.

And, finally, as I mentioned previously, in July 2007 BAE Systems acquired Armor Holdings. That acquisition added an MRAP variant known as the Caiman, based upon the design of the U.S. Army's Family of Medium Tactical Vehicles. In addition to meeting the MRAP survivability requirements, this vehicle has been designed to have parts commonality with the FMTV, resulting in enhanced supportability. The contracted production for Caiman runs out in February of 2008.

Congress, the Office of the Secretary of Defense, and the services should be commended for recognizing this critical need to protect our troops and providing the necessary priority and funding.

BAE Systems has been leaning forward, often self-funding activities in advance of contract, with the sole focus of rapidly delivering the most survivable vehicles to protect our troops. These efforts have been challenging, with requirements to deliver vehicles within weeks of contract award and only months after initial design.

For example, we delivered Caimans 43 days after contract award. We designed and delivered RG–33 in less than 7 months; and subsequently, the ambulance variant, 13 weeks after contract award.

We have five principal MRAP manufacturing sites: York, Pennsylvania; Aikin, South Carolina; Sealy, Texas; Fairfield, Ohio; and Johannesburg, South Africa. Assuming receipt of additional orders in time to ensure continuous production, we will achieve our currently planned maximum rate of 600 vehicles per month in April of next year.

Moreover, activity is under way to ensure that components of our MRAP variants can be built in all of our major facilities. BAE Systems is prepared to make additional capital investments to increase capacity.

Last, we stand ready to further expand monthly MRAP production by allowing other manufacturers to produce our MRAP design variants under license if so desired.

I would like to single out the MRAP program manager, Mr. Paul Mann, for his unceasing leadership. It is noteworthy that normal contractual practices could not possibly keep up with the fast pace of this program. We have maintained an open, direct, and professional relationship with Mr. Mann and his program office. This collaboration within the framework of the contract deserves commendation.

We are prepared to collaborate with the other prime contractors to improve survivability, accelerate production and fielding, and enhance sustainment of the MRAP vehicles. We are already collaborating with the other prime contractors here to cross-train our field service representatives on all the vehicle variants to optimize in-theater support. We stand ready to work with our colleagues here today to better meet the needs of the troops.

In closing, and on behalf of BAE Systems and the Land & Armaments team, I would like to thank you for this invitation to come tell our MRAP story. We are very proud to be a part of the MRAP program, providing these highly survivable vehicles to the warfighters, and we are well positioned to respond rapidly to the continuing program needs.

Thank you, Mr. Chairman.

Mr. TAYLOR. Thank you, Ms. Hudson.

[The prepared statement of Ms. Hudson can be found in the Appendix on page 76.]

Mr. TAYLOR. The Chair now recognizes Mr. Gordon McGilton, Chief Executive Officer of Force Protection.

STATEMENT OF GORDON MCGILTON, CEO, FORCE PROTECTION, INC.

Mr. MCGILTON. Thank you, Chairman Taylor, Chairman Abercrombie, and members of the House Armed Services Committee. Force Protection Industries appreciates this opportunity to update with regard to the critical MRAP program.

As of the 1st of November, Force Protection has delivered 1,389 Cougar and Buffalo mine protected vehicles to our servicemen and -women. They are as follows: 146 Buffalo route clearance vehicles; 153 Cougar Iraqi light armored vehicles; 28 Cougar hardened engineer vehicles; 216 Cougar joint EOD rapid response vehicles; 5 Cougar engineered vehicles delivered to Canada; 108 Cougar Mastiffs for the United Kingdom; and 734 Cougar MRAP Category I and II vehicles.

In order to put the delivery of those vehicles into some perspective, I will provide a brief synopsis of our history relative to building mine protected vehicles.

Force Protection's sole mission is to manufacture, deliver, and maintain vehicles that feature the best protection available to the American and Coalition servicemen and -women facing the threat of improvised explosive devices. MRAP manufacturing is not an additional business line for us; it is our only job. Every action we take, including investments and partnerships, is designed to help fulfill this mission.

Force Protection Industries was incorporated in early 2005. At that time, we employed 200 people and occupied 100,000 square feet of manufacturing space in South Carolina.

By the end of 2005, we expanded to 250,000 square feet of space and 350 employees. Most importantly, we had delivered 60 vehicles. By the end of 2006, we had quintupled the number of vehicles delivered to 296. In 2006, we also had expanded our manufacturing facilities to 450,000 square feet and added 400 employees for a total of 750 employees.

Today Force Protection employs 1,800 workers and occupies nearly a million square feet of manufacturing space in four facilities in South Carolina and North Carolina. These manufacturing facilities are also supported by a significant research and development facility and a 300-acre blast and ballistics testing facility also located in South Carolina.

In addition, we formed a new company, Force Dynamics, through a joint venture with General Dynamics Land Systems. This partnership gives us access to General Dynamics' substantial manufacturing capabilities and as a result there are now multiple facilities manufacturing Cougars. Our supply chain has been expanded and our ability to rapidly incorporate design improvements is greatly enhanced.

Of particular note, we have been able to reduce the price of a Cougar by roughly $150,000 per vehicle to a current price of under $490,000. We have expanded the enterprise to include additional manufacturing by using subcontracting and licensing agreements.

Because of the potential demand for MRAP we focused on two program goals. The first was to establish enough manufacturing capacity within our joint venture with General Dynamics so that we could deliver roughly 500 vehicles a month. The second goal was to license production to other commercial and military industrial contractors to expand or contract our delivery capacity as necessary to meet the demands that are likely to change periodically.

Additionally, teaming allows us to spread our manufacturing capability to ensure that we are not too reliant any one supplier or any one plant. In fact, Mr. Chairman, this kind of teamwork has been a hallmark of Force Protection's story. It has provided tremendous benefits for our men and women in harm's way.

The following is a summary to date of Force Protection's interaction with other manufacturers. Through our joint venture with General Dynamics, Force Protection has increased capacity across all functional areas, including engineers manufacturing supply management logistics planning and execution and sustainability. GDLS produced more than 60 Cougar vehicles in the month of October 2007 and will reach 194 vehicles a month by February of 2008.

Through Force Protection's cooperation with Spartan Chassis we have been able to expand our robust automotive and final assembly capability. As a consequence, our enterprise can now rely on Spartan to help us deliver several hundred Cougars per month.

Working with Armor Holdings, formerly Stewart and Stevenson and now BAE, Force Protection today has delivered 200 additional Cougar vehicles. This capacity could be available for continuing delivery should sufficient orders require.

Force Protection along with Marine Corps Logistics Base at Albany, Georgia, performs Cougar capsule manufacturing. This military depot is in production and is a valuable part of our enterprise.

By licensing our Cougar designs to BAE Ground Systems Division, we have jointly delivered over 350 additional ILAV vehicles to the Iraqi Army. Force Protection continues to produce and support these vehicles in conjunction with BAE.

Ongoing discussions between Force Protection and Red River Army Depot will facilitate the establishment of an Army MRAP maintenance and training facility. We have also looked into Red River's manufacturing capacity in some fashion to manufacture Cougars should the demands dictate.

Likewise, Force Protection has an existing agreement with Textron to manufacture Cougars. Although this agreement has not been executed due to the lack of orders the opportunity is still available to us. Should the demands of the program warrant it, we will quickly add Textron to our team and expand the manufacturing base for Cougar MRAPs.

Finally, Mr. Chairman, Force Protection is working with the Medical University of South Carolina, MUSC, to help fund the establishment of a research center to improve the medical technology available for diagnosing and treating traumatic brain injury resulting from IED attacks. Through this agreement, MUSC will learn more about the physics of a blast using our South Carolina test range. We hope to learn more about the physical effects on the soldiers, thus enhancing the vehicle designs in an effort to prevent the injuries from occurring in the first place and also to try to minimize them before they happen.

In June of 2007, representatives of the Department of the Navy asked Force Protection to determine the maximum production rates we could achieve by December 31st of 2008. Our exhaustive review of every production aspect, including availability and training of new employees and access to critical parts for the Cougar, led us to conclude that the Force Protection led team could produce 500 vehicles per month by April of 2008 and 1,000 vehicles per month by July of 2008. That would be for a total of 12,100 MRAPs by the end of 2008.

Our analysis did find two areas of concern: Tapered roller bearings which are used to manufacture our transfer cases and axles. The conclusion of the DX DPAS rating has eliminated the roller bearing concern and we have identified alternative axle suppliers. Our analysis found no other show stoppers that would prevent us from achieving production rates of approximately 1,000 vehicles a month, including steel, armored steel, engines, transmission, glass, tires and wheels.

Force Protection has enjoyed a highly professional relationship with all of our customer program offices throughout three-plus years of providing these vehicles. Each and every one of the program offices has undertaken ways to facilitate our ability to deliver more efficiently. I would like to publicly express my appreciation to Brigadier General Brogan, Major General Catto,along with Mr. Barry Dillon at Marine Corps Systems Command; Mr. Paul Mann, the current MRAP Program Director and his predecessor, Marine Colonel Michael Micucci, along with their staffs; brigadier General

John Bartley and his staff at the Army Tank Command and the Defense Contract Management Agency that works so well with us to get these vehicles out the door in the quality they need to be in.

The kind of growth that we have been able to maintain is replete with challenges which stem from establishing the requisite capacity, acquiring the necessary facilities, and deploying the needed processes and procedures to manufacture in a reliable repeatable fashion. Despite these challenges each and every one every of our customer agencies has demonstrated a willingness to focus on the end result: Delivery of these lifesaving vehicles.

Today we have an established open line of communication with our Marine Corps, Army, and DOD customers and work closely with them in forecasting future demands to the maximum extent that it is known.

Now, Mr. Chairman, I have been asked what can the government do to help? The government can provide greater visibility into the long-term plans for this program. That is crucial for us to know what is coming down the pike. I think it would be the same for all of us.

By the second half of this fiscal year the government can facilitate the introduction of friendly foreign customers as a means to further stabilize the program and allow industry to achieve maximum utility for the capacity we are creating. Likewise, the government can take advantage of long lead time material orders as a means of enabling us to secure critical supply deliveries in advance of production orders.

It has been and remains our distinct pleasure and privilege to be able to play a small but critical role in helping to ensure our servicemen and servicewomen execute their missions and come home to their loved ones. We are rightly proud of the efforts of our people and of their dedication to such an inspiring cause.

Both Cougar and Buffalo vehicles perform extremely well in our active theaters of operation. But as I said, Force Protection's most important measure, the one that we take home at the end of every day is simple: It is the number of lives that our vehicles save. That is the mission that we live with.

Thank you for the opportunity to provide this update. On behalf of all of the employees of Force Protection and all of our partners, we look forward to continuing being a part of this strategically important program. Thank you, Mr. Chairman.

[The prepared statement of Mr. McGilton can be found in the Appendix on page 87.]

Mr. TAYLOR. Thank you, Mr. McGilton. The Chair now recognizes Mr. David Heebner, President of General Dynamic Land Systems.

STATEMENT OF DAVID K. HEEBNER, PRESIDENT, GENERAL DYNAMICS LAND SYSTEMS

Mr. HEEBNER. Thank you, Chairman Taylor, Chairman Abercrombie, Ranking Members Bartlett and Saxton, for inviting us to testify today. My name is David Heebner and I am President of General Dynamics Land Systems.

It is an honor for me to represent General Dynamics Land Systems employees and our component suppliers who are building MRAP vehicles for American forces. My objective here today is to

report to you that GDLS and our partners are focused on meeting or exceeding the extremely aggressive plan to deliver MRAP vehicles to our fighting forces.

We have added manufacturing facilities, hired and trained employees and qualified suppliers, and are helping suppliers increase their capacity. We have encountered issues common to start-up programs, but we have dealt with them and have continued to ramp up production.

I know you are aware that I have submitted a written statement for the record, so in the interest of brevity please let me simply address your specific questions in the next few minutes.

I am going to answer the last question in your letter first. Specifically, are we willing to communicate and interact with our other MRAP suppliers to share best practices for MRAP vehicles? The answer, Mr. Chairman, is absolutely. There are minor contract terms that would need to be worked out, but we are ready to collaborate if doing so improves the survivability or production rates of these vehicles.

We are already cooperating in specific ways. For example, at the Red River Arsenal our service employees and those of other manufacturers are being cross trained in performing maintenance on all MRAP vehicles that are being deployed. So are the military mechanics. That means that no matter which vehicle they might need to support the maintenance personnel will have the training to keep MRAP vehicles in service.

In response to your question about relationship with the program office, communication and cooperation with the MRAP program office has been highly intense, professional and effective. While we would have preferred earlier larger contract awards, the program office provided early insights of potential awards to enable our planning and rapidly issued contracts as soon as funds became available.

Our product performance feedback from field testing and insights on emerging threats has been shared. GDLS compliments the program office for its responsiveness to changing conditions and for their energetic and timely resolution of issues requiring immediate attention.

You also asked about our industrial capacity, material chokepoints at the subtier supplier level and the expansion of GDLS Canada's industrial capacity. GDLS Land Systems is producing two different types of vehicles for the MRAP program: The improved RG–31 vehicle is under contract to General Dynamics Land Systems Canada. We have established a U.S. production site at Demmer Corporation in Michigan which will allow us to deliver 600 RG–31 MRAP vehicles by March 2008. This is an example of cooperation between two major defense companies, General Dynamics and BAE, to provide urgently needed capability to our forces.

The Cougar MRAP Category 1 and 2 vehicles are built in partnership with Force Protection Industries of South Carolina. With FPI's full support and less than 120 days following contract award, GDLS capitalized, installed tooling, established process documentation, hired and trained hundreds of employees, and delivered its

first complete MRAP vehicle from a new production site in Alabama.

In addition, we established production at Spartan Motors in Michigan which, together with our Alabama site, will produce 105 vehicles this month and their combined monthly rate will be 226 by April of 2008.

The Force Dynamics joint venture has combined the strengths and full capabilities of both companies to better manage, produce and successfully deliver MRAP Cougar vehicles. We are currently 55 Cougar MRAP vehicles ahead of schedule and will continue to accelerate production. Together the joint venture will deliver more than 2,700 vehicles by April of next year.

Addressing your question about material chokepoints at the subtier supplier level, axles and high hard steel supplies have been challenges for us at times, and we are developing alternative supply lines to overcome the issues.

For vehicle axles we are work with Arvin Meritor, American Axle & Manufacturing, Axle Tech, Dana Corporation and Magna to augment our current suppliers.

Similarly, we are bringing on second source for high hard steel, Algoma, to complement the existing supplier, Mittal. We constantly take the pulse of our supply chain monitoring to ensure orders are placed inside our material lead times.

In summary, permit me to assure you that we share your commitment to protecting our warfighters through the MRAP program. We are doing everything possible to meet or exceed planned deliveries and we are willing to share best practices among MRAP suppliers. Maintaining high quality production momentum is our most critical objective, which means that funding for new orders must be in place and contracts awarded by early December to avoid disruption at the Alabama, Michigan, Ohio, and South Carolina production plants.

Thank you for this opportunity, and I look forward to your questions.

[The prepared statement of Mr. Heebner can be found in the Appendix on page 99.]

Mr. TAYLOR. The Chair thanks the gentleman. The Chair now recognizes—you are going to have to help me out, sir. Mr. Archie——

Mr. MASSICOTTE. Massicotte. You got it right.

Mr. TAYLOR. President, International Military and Government.

STATEMENT OF ARCHIE MASSICOTTE, PRESIDENT, INTERNATIONAL MILITARY AND GOVERNMENT, LLC

Mr. MASSICOTTE. Mr. Chairman, distinguished members, it is an honor to be here in front of the committee, and thank you for all you are doing in support of this program and the oversight.

I am Archie Massicotte. I have 30 years experience with the company within Navistar both from the engine side as well as the truck manufacturing side. I have since taken over as President of the Defense Group here, and it is quite an honor.

People may recognize us as International Harvester back in our day, and for over 100 years we have been manufacturing vehicles. In fact, in 2006 we manufactured 160,000 commercial vehicles and

560,000 diesel engines that have been in all our products, as well as supported other customers, and you see our product all over the streets today.

When you look at our global presence, we have dealers in over a thousand different states as well as in North America and outside of the globe. And when you look at the dealers that we have in other countries, we are in over 75 different countries, including Iraq and Afghanistan. When you look at the spare parts support and the things that we bring, we bring a global presence from a commercial base.

We are not new to the defense business. We have been in the defense business since World War I. In you look at the trucks that were in World War I and World War II and some of the other conflicts, we have been there. But the MRAP experience that we have experienced, on May 31 is when we first received our first contract. Since that date, May 31, 165 days later, we have delivered 407 vehicles and 95 of those vehicles today are in theater and there is more in the pipeline, obviously you heard with SPAWAR as well as our manufacturing facility.

We are on the path to achieve 500 per month by the end of February, and that is what we are under contract to deliver. We have parts on the ground today within the military. We have delivered 58,000 part numbers to Red River Army Depot to be deployed.

In response to your questions regarding some of the adequate funding and of the other concerns we have, I think as my other colleagues here, we are concerned beyond April as to whether or not there is going to be adequate funding to keep these lines hot and making sure that we don't have a disruption or a hiccup in the system that would cause us to idle the facility.

When you look at the industrial base and where we are at today, our issue is not building chassises, it is not getting product, and it is not manufacturing at West Point. Our issue today is bringing the supply base with us to achieve that 500 a month goal. And when I talk about the supply base I am primarily talking about armored steel and manufacturing that armored steel into our product.

When you look at the cooperation that we see from the program office, I, like my colleagues, General Brogan, Mr. Dillon, and Mr. Mann, it has been outstanding. It has been an open door policy. We pick up the phone if we have an issue, the phone rings, they answer it and we get a resolution fairly quickly.

The SPAWAR integration process that we are working with that you spoke about today, we have had a collaborative relationship with them and we are on the ground with them today doing integration from our facility today and we have been since September. So we have been incorporating some of that SPAWAR integration into the product and so it does speed through SPAWAR.

Leaning forward, that is one of the things that got us the depth that we have today in being able to aggressively go out and manufacture vehicles. We as a corporation took that risk and we continue to take that risk. When we look at the collaboration with the Red River Army Depot and doing all the collaborative training, that has been a very wholesome environment and I think working with TRACOM and some of the folks there to get that message

across and get field training done across all of our products, and being able to train at Red River Army Depot folks as well as putting FSRs in theater has all been working very well.

Mr. Chairman, we took this contract on back in May. We told our people, this isn't a contract, this is a privilege. And we today at International look at that as truly a privilege. We welcome the opportunity to continue. We look for the continued support with the armed services that we are working with today.

And I close with, Mr. Chairman, you asked me to provide a video, I don't know where that fits in this committee but we are able to provide that if you choose.

[The prepared statement of Mr. Massicotte can be found in the Appendix on page 106.]

Mr. TAYLOR. With unanimous consent, since most of the members of the subcommittee have not had an opportunity to see one of these facilities I would like to give the gentleman the opportunity to show it to give us some idea and give the American public some idea of what is involved in building an MRAP if there are no objections. Without objection.

Mr. MASSICOTTE. Thank you.

[Pause.]

Mr. TAYLOR. In the interest of time, if it starts we will go ahead and we will stop. Again I want to thank all of our witnesses for being with us. I hope they can get this going.

Mr. McGilton, while they are working on this and we certainly want this to be shown, you mentioned some challenges with long lead items and I would ask that you could clarify that at this time. The point of this hearing is to express our frustration, but it is an American frustration. And anything that this Congress can do to help you in your efforts, we would like to know now. If you could while we are waiting for the video, walk us through what those frustrations are and let us know what we can do to help with that.

Mr. MCGILTON. Well, sir, I am not sure who would be the responsible people, so I will tell you what the challenges are and you can determine if you are the right people. The four of us that you see sitting on the panel today we had lunch before we came to this and we had a telephone conversation prior to that lunch. And the two things that we all agreed: First of all, the cooperation on this has been tremendous. The barriers that we have are the visibility. I believe that many of the members have asked questions about visibility, how this program needs to be a program of record. There needs to be visibility.

I think that this particular committee appears to have a great understanding of what is necessary in manufacturing. So the thing that we need most is visibility. We need to know what is going to happen with the program. We can't operate month to month. That is extremely difficult for us to make these investments. I believe each and every one of us at this table have leaned forward. We have purchased steel and components and very expensive items in the belief that there was going to be a need for these vehicles.

So the single most important thing for us is visibility going forward. If we can resolve that issue, we are all professional manufacturing people. That is the part that we need. Everything else is up to us. Everything else is up to us. We have resolved those issues

up to this point by writing checks out of our own small checkbooks at some times. Our particular company does not have the luxury of some of these companies. We have been around for three years. So when we write a check for tens of millions of dollars, it is a big deal.

So I would say, visibility. There is nothing else that would be more valuable to us than that.

Mr. TAYLOR. As I am sure you know,—just a second, I am sure the gentleman knows that just today by a very large vote the House approved the defense appropriations bill for next year, approximately $435 billion.

Mr. MCGILTON. Yes, sir.

Mr. TAYLOR. Do the provisions of that bill give you the certainty that you seek to keep your program going for the next fiscal year? And if not, what else do you need?

Mr. MCGILTON. Sir, I would have to see the provisions of the bill. I am not familiar with it. Once I see the provisions of the bill I could give you a better answer.

Mr. TAYLOR. For the record we would welcome your comments toward that, because I would guess that there will be a supplemental at some point. If we need to address it we need to know specifically what you need.

Mr. MCGILTON. Yes, sir. We will get back to you with that information. As soon as I see the details and we can understand how the business is going to be awarded, I can give you an accurate answer.

Mr. TAYLOR. I think we are ready. Could we have some confirmation from down below? Are you ahead to show this?

[Pause.]

Mr. TAYLOR. Again, I apologize that this is taking longer than anyone would have liked. So let me ask the next question.

About a month ago I was able to visit Aberdeen. I thought that the folks there gave an excellent briefing. One of the documents that they provided to me that unfortunately is classified, but that each of you are probably familiar with, is it listed the potential vendors across the top. And about eight different requirements for each of the vehicles that they sought. It gave a pass or failing grade and it even rated it within the passing and failing whether it was marginal or did the job well. And it was things like getting rid of the fuel tank in the event of an explosion, are the seats designed the best way to minimize the casualties to men and women on board.

What I found interesting was that one company only did one thing well, but they got like an A-plus on that one criteria. Several of your companies did several things well. And I asked the people at Aberdeen then who were government employees working with your products to what extent were they sharing the information to all of the vendors and saying okay, you are doing five things really well. This company over here is doing that better and we want you to do that because at the end of the day it is all about the troops. It is not about your companies. It is not about this Congress. And it was about the troops, and I was assured at that time that they were going to be sharing that information, that they were going to

get together with each of your companies and get with your legal staffs.

The Nation is paying for this information and the Nation is paying for these vehicles. To what extent has that happened? To what extent are they maximizing things that each of your companies does well, but also enable to you do something better if they say see another company managing a little bit better than you? Or is that happening at all? Because I was told it was going to happen.

You want to start, Ms. Hudson?

Ms. HUDSON. We have not received any test result or information about our colleagues' test results. To the best of my knowledge, we have not seen any of that comparative data. Let me confirm that with my colleagues.

They confirmed that we have not received.

Mr. TAYLOR. Ms. Hudson, as the President of one of the competitors, would you object or would you approve of sharing that information? Since at the end of the day it is about saving lives and limbs in Iraq and Afghanistan.

Ms. HUDSON. We are willing to support anything, sir, that supports improving the survivability of MRAP and saving lives.

Mr. TAYLOR. Speaking on behalf of your organization?

Ms. HUDSON. Absolutely.

Mr. TAYLOR. Mr. McGilton.

Mr. MCGILTON. Yes, sir, we are certainly willing to share it.

Mr. HEEBNER. Yes, sir, we are.

Mr. MASSICOTTE. Absolutely.

Mr. TAYLOR. What I would ask is for the other vendors who may not be with us today, I am going to ask the staff to get with them. If you could submit something to this committee and to the DOD in writing to that effect, again I think it is in the best interest of everyone.

The gentleman of Hawaii has some questions, and I yield to him.

Mr. ABERCROMBIE. Mr. McGilton, I want to make sure I understand. You said you have two points, and I think we got to one.

[Phone rings.]

Mr. ABERCROMBIE. I have got domestic tranquillity to handle. "I'll call you right back."

Mr. MCGILTON. Sometimes when the message comes in from the mother ship you have to take it.

Mr. ABERCROMBIE. Can I get a witness on domestic tranquillity? Didn't someone running for President do that? Have to answer the cell phone? I commute 5,000 miles one way, so you better believe that I am going to preserve domestic tranquillity.

You said visibility. By that did you mean that you would like some clarification on whether this is going to be a program of record?

Mr. MCGILTON. Certainly, if it became a program of record that would be a vehicle through which we would all have clarity. Without assuming that it is a contract or a commitment to us, the more visibility we have to the total program, the better off we all are. Certainly, anything that is specific to our company or any of my colleagues' companies, that is a further help.

The next thing is that the program actually have some duration to it. Managing a program from month to month is extremely dif-

ficult. I personally am delighted regardless of how the mix of contracts are awarded, I am personally delighted that we have down selected to three, with a fixed universe of vehicles that you are going to buy. To spread them out over a large number of people can do nothing but introduce variation and reduce the size of the opportunity that we get to invest in.

So those two things. It was have visibility to the program in large, but make the orders—don't manage the program on a monthly basis with a series of small orders. I think you do that in the beginning so that you get an understanding of who can perform and who can't. But once you get that understanding, it is to everyone's benefit to then issue long-term, larger orders so we can gear up. We have built these machines. Let us turn them on. Let us turn them on. So it was a two-part; basically the same thing.

Mr. ABERCROMBIE. Thank you.

Mr. McGilton, you have an extraordinarily interesting background, I think, in terms of you are someone who can say literally that you started out and where you are today is the result of a very extensive line of experience going back to being in the Marine Corps in the 1960's. Is that a fair statement?

Mr. MCGILTON. Yes, sir. Yes, sir.

Mr. ABERCROMBIE. Now obviously being an infantryman in the 1960's is not necessarily the same thing today. But some of the principles still apply; right?

Mr. MCGILTON. Yes, sir.

Mr. ABERCROMBIE. Can you give me your perspective from where you sit today based on, from my point of you, your extraordinary experience as a tool maker subsequent to your service in the Marine Corps and on through all the various manifestations. You have been through almost every manufacturing existence there is. Is that a fair statement? I don't think I have seen anyone come before the committee that has more extensive experience than you with regard to literally every aspect of manufacture leading to this MRAP manufacture today. In fact, it almost seems that what you are doing today is almost the culmination of a lifetime of experience. Is that a fair characterization?

Mr. MCGILTON. Well, sir, when my family characterizes it they call me unstable. But to answer your question seriously, yes, sir, everything I have done to date prepared me for what I had to do, which is take a company that virtually did not exist three years ago. We had to build a company while building the product and it wasn't one thing that had to be done. Everything had to be done. Any system that we needed had to be created before we could use it. And we had to introduce a product that did not exist before and ramp up the production capability to support this enormous demand that is created.

Mr. ABERCROMBIE. What is your evaluation of the MRAP vehicle? We all think we know what we are talking about but it is a mine resistant vehicle, right? And it is assault protective vehicle. What does that mean? There are people listening to us, taxpayers, interested citizens. What does it mean? What are you doing? And what is your evaluation of the vehicle that you are building?

Mr. MCGILTON. My evaluation of the vehicle that we are currently building is we have applied all of the technology. The threat

that we are seeing today in this war is not a threat that is new in the world. We have become aware of it in the Western world as a result of the most recent conflict. But all of the terrorist countries around the world have been experiencing these threats. So the threat is more than 40 years old.

The vehicles that we build today at Force Protection and that our colleagues build, our vehicle is under license and their version of the same vehicle, it is generally building around a ballistic capsule. We build a ballistic capsule to protect the people and the equipment that is inside of it. We consider everything on the exterior to be expendable and we also design it in such a way that it is reusable.

The total cost for the reuse of a monocot construction, which is the kind of construction we use to built our ballistic capsule, the vehicle goes into harm's way and experiences a threat that takes place in such a short time frame you cannot imagine the speed with which these events take place.

Mr. ABERCROMBIE. And what happens?

Mr. MCGILTON. Well, sir, I am going to describe it, I am going to try to describe it as best I can without running afoul of any of the restrictions that are placed on me relative to describing the performance of the vehicle.

Either from the side or below the vehicle there is an explosive force that can vary by tremendous amounts. The speeds with which this takes place, there can be energy traveling at maybe up to 7,000 meters per second. Everything that is in the path of this energy is going to turn into a projectile. It can come from the side or the bottom. There is an enormous blast of hot gas. The force and the concentration of the force will take just about anything in its way and it will do one of two things. It will either rip it apart or hurdle it at great speeds.

The acceleration that takes place in one of these vehicles during one of these events it is almost unimaginable. That is why the people inside have to be buckled in and you have to put them in a capsule that regardless where it is thrown, they still have to be safe when it lands.

Mr. ABERCROMBIE. And the human bodies inside are subject to explosive trauma; is that right?

Mr. MCGILTON. It is more acceleration. If there is a penetration it could be explosive trauma by something coming through and damaging the tissue. But by and large, if you can maintain the integrity of the hull and keep the people strapped in, they may suffer from injuries but they are likely to come home alive.

Mr. ABERCROMBIE. So this is about as basic as it can be for an infantryman in a vehicle; is that correct?

Mr. MCGILTON. Yes, sir. Yes, sir. I would draw this analogy.

Mr. ABERCROMBIE. All right, draw the analogy.

Mr. MCGILTON. The analogy between the feelings I had when I was in the military and the people that followed me was looking at a life of 24 hours a day 365 days a year of terror. Because no matter where you were someone was trying to kill you. They might be your friend during the day but at night they might be your enemy. They would kill you while you were sleeping or they would kill you while you were on liberty. And to have that kind of fear

for such an extended period of time and to wonder is the government doing everything that they can do to protect me?

And I think that awareness of that fear when I walked into Force Protection the first time, I wasn't looking for a job, I did not need a job, and I did not want a job. But when I walked in and saw how much this technology could address the fear that I know people feel when they are at war, and that somebody had to stay and get the government to buy these vehicles, and then build a manufacturing facility to build these vehicles, it was a moral imperative for me to not go home.

I arrived at my company with one pair of trousers, two pair of underwear and two shirts. That was three years ago. I haven't been home since. I came just to give some advice, and when I saw how effective this technology was and I understood how much alleviation of fear we could give to anyone that climbed into one of our vehicles, I couldn't go home. And I still can't go home and I won't be able to go home until the last person comes back from there or until there is enough trucks over there that I feel that the people that need to go on patrol without fear will have the ability to go on patrol without fear.

Mr. ABERCROMBIE. Thank you. Sometimes when you submit your background, you might think who is going to read this? But I did.

Mr. MCGILTON. Thank you, sir.

Mr. ABERCROMBIE. And I appreciate it. I think people who may not know exactly what we are doing here now have a good idea what this is all about and why this is important.

Mr. MCGILTON. Sir, I would add this one thing. What I do is far less important than what the people at the company that have their names over their pocket do. If I did not show up, it probably wouldn't make that much difference. But if they did not show up things would not happen. And so I come here as their representative. And I don't deserve any of the credit of what is going on, but I represent the people who do deserve the credit.

Mr. ABERCROMBIE. I think you have done that very well here today.

Mr. TAYLOR. The Chair thanks Mr. Abercrombie. Apparently our technical difficulties have been solved and thank you, sir, for excellent responses to his questions and for excellent questions. Technical problems have been solved.

Mr. Massicotte, if you could narrate what is going on, please.

[Video shown.]

Mr. MASSICOTTE. Sir, this is our Melrose Park engine plant. This is where we produce the engines that are going into the MRAP today. But this is also going back to our commercial base as well. And this is just the manufacturing facility that produces MRAP engines about three days before the chassis is manufactured in Garland, Texas, and you will see that when it comes up in the next slide.

It is very lean manufacturing. Just-in-time. All engines are tested prior to being shipped and when they arrive at the factory they arrive in the Garland assembly plant in Garland, Texas. This is where the assembly line is that builds the chassis. This chassis plant alone produces 60,000 vehicles a year. And this is where the

first truck could be a garbage truck, a cement mixer and the third truck in the line could be an MRAP.

And this plant has plenty of capacity. We are running it 4 days a week, 10-hour shifts, so we have plenty of capacity either to go to a second shift or a Friday or Saturday in overtime.

This is where the vehicle gets the integration done with the armor. And this is the West Point, Mississippi, facility. This was coengineered with Mississippi State University that helped us do the process integration in that factory. And this is literally an assembly line. This plant is facilitized for 500 a month and we are right now running at the current rate next month of about, I think it is 250 vehicles is what we are obligated to by contract.

We have got roughly 500 employees in that facility today. When we get to the 500 a month coming in February, we will be roughly about 900 employees strong. Many of the employees on that line today have either relations or brothers or sisters serving in Iraq. And these people are very proud people to be able to provide this type of service.

This is the other line that we have just established when we are doing the SPAWAR integration where we are taking the work that we spoke to earlier and putting the SPAWAR integration into the vehicle before it leaves our facility. Every truck is road tested and BCMA goes through that. That is our first delivery in theater. And I guess that is the real test right there when the soldiers get in it and, as Mr. McGilton said, bring them home safely, and we are not done until we get everyone home.

Mr. TAYLOR. Thank you very much. The Chair now yields to the gentleman from Maryland, Mr. Bartlett.

Mr. BARTLETT. Thank you very much. Mr. Chairman, I don't know how much more quickly we could have manufactured these vehicles if there was no limitation on the availability of subcontractors with the materials they need or if you had no limitation on the materials that you need. As we are sitting here discussing this, I thought back through my 81 years of life and I am probably the only person in the room here that lived through World War II. And I will tell you, Mr. Chairman, our country is not at war. The military is at war, our military families are at war. But our country is not at war.

Had this been World War II, we would have stopped turning out these silly SUVs and pickup trucks for personal transportation and those assembly lines would have been producing these MRAP vehicles.

I think that might have been good for the American people because they are not at war. Our military is at war. Our military families are at war, but the average person in this country, you know all they know about the war is what they see on television and their life has not been impacted one bit. And I think it would have been nice, Mr. Chairman, if we had had high enough priority that maybe we could have impacted the lives of the citizens of our country. I think they might have appreciated the sacrifice that is made by our service people and our service families.

I want to thank you all very much for the contribution that you are making. You are kind of forced to do this at the fringes. Thank

you very much for your contribution, and I hope that if we have another war, Mr. Chairman, that our country will be at war.

We haven't been at war since World War II. We have fought a number of wars since then but the country has not fought those wars. Thank you very much for your service to our country.

Mr. TAYLOR. Thank you, Mr. Bartlett, for some excellent remarks. The gentleman from Hawaii.

Mr. ABERCROMBIE. Mr. Heebner and Mr. Massicotte and Ms. Hudson, in terms of size, if you will, in terms of reach, corporate reach, the three of you as opposed to our friend who spoke previously are in much different corporate positions. And I just want to make sure, especially in the context that Mr. Bartlett has just enunciated for us, if I understood particularly Mr. Massicotte's remarks. Do we have the assurance, regardless of whether we move forward on a policy side about program of record and legislative activity that assures funding and reach, what about the question of the logistics of supply? I believe steel was mentioned and of course we have a particular kind without going into the classified side of things, the steel not—all steel is not created equal. And what is required of the components in the Mine Resistant Assault Protected vehicles is different than the SUVs that we are talking about, et cetera.

Are we assured or are you assured, particularly so with International's reach, are we assured that your cooperative agreements with one another are such that the supply side of things will be there, that the materiel side of things will be there and if we are able to achieve the kind of visibility and continuity, if you will, in terms of policy that you will be able to complete the task of providing these vehicles?

Mr. MASSICOTTE. Congressman, if I may, we have today secured adequate supply throughout our contract that we have today. When we get into the expanded capability of the next threat level where it is going to require more steel, there is a concern that we are tapping the industry and we believe that there is going to have to be a global review of where else can we get high hard steel. I think when you look at the capacity constraints, I am sure all of us here are using a lot of the same supply chain. That supply chain only has got so much capacity. And I think one of the concerns I have, and I am sure my colleagues do as well, is that when you get into the next threat level and it requires more steel, more capacity——

Mr. ABERCROMBIE. What do you mean when you say the next threat level? What universe are you looking at?

Mr. MASSICOTTE. I am going to talk about that without getting into the threat itself, but more of MRAP 2, it is going to require much harder, broader base on the armor side. That is going to bring——

Mr. ABERCROMBIE. In other words, this will have logistical implications in terms of supply, possibly in terms of pricing?

Mr. MASSICOTTE. I think we are going to exceed capacity—that is where I am coming from—of the steel supply.

Mr. ABERCROMBIE. Mr. Heebner, do you have an observation that you can share in that context?

Mr. HEEBNER. I would like to make an observation that relates back to the comment that you made in the earlier panel about

whether or not program of record was an important element of this program. As we look at the program of record issue, what it really means is that you have the opportunity to gain insight into the program's future. That allows you to communicate with your supplier base, inform them of your needs, and to ensure that the capacity is there when you need it.

The first point I would make is that is—my compliments to Paul Mann and his team, because to the degree they have information they did share it with us early in the process that allowed us to communicate with our supply base. That is what allowed us to go from an empty factory to production in less than 120 days.

The second issue that once you have that supply base conditioned for your program, having the timely receipt of funding is imperative to be able to keep that supply base going so that we have continuity of effort on their parts.

That is why in my comments I made the comment that the earlier and the larger the contract elements can be, the more we can condition that supply base to make the investments necessary to move forward more quickly.

Mr. ABERCROMBIE. You too in your biography you bring some unique characteristics to the table. You have more than three decades of experience in the Army, much of which prepared you or caused you during your professional life in the service to direct your attention to items like this; right? So when you speak about the program of record you are not just speaking from the point of view of what is convenient for you now in your present capacity, but from your experience, I take it, from your, as you say, your more than three decades of professional focus.

Mr. HEEBNER. Thank you, Mr. Chairman, for mentioning that. I did spend more than 32 years on active duty with the United States Army. And in that period, I fell in love with soldiers. And my concern for soldiers continues today in what I do.

But the point that I would make with you that is most relevant to the discussion of this committee today is that the employees of General Dynamics today who I oversee, and those I am sure in other panel members' employ, share the same concern for the soldiers that are out there in harm's way in the global war on terror. So having worn the uniform does give me a special credential, and I am proud of that, but working with the employees who care as much about what they do in providing a service to our deployed forces is equally rewarding.

Mr. ABERCROMBIE. So the program of record is not just a phrase of art that we are tossing around here today; it has real consequences on both sides of the equation then, both in the private sector and in terms of the direction for the military service for which the term is being employed?

Mr. HEEBNER. That is correct, Mr. Chairman, and just making sure that we see as far as possible into the future of the program needs allows us to harness the full capabilities of our companies and our employees to be there when we are needed.

Mr. ABERCROMBIE. Ms. Hudson, in your testimony you paid particular attention to the discussion we are having now; is that a fair summary?

Ms. HUDSON. Yes, Mr. Chairman, it is. And with regard to your questions about the supply chain, at the moment we have been able to ramp up our supply chain where we are able to meet our commitments and our supply chain is committed to the production schedules that we need to execute the contracts that we have today.

But I echo Mr. Heebner's comments about the need to have some visibility. Chairman Taylor talked about production planning and execution. Where you are going to have the most effective production, where we can have the opportunity to maximize our production rate, we need insight into what is going to come so that we can place orders for material in a timely way, so that we don't ramp up to max production and then have to stop for a month and then pick it back up again to meet the coming orders and needs.

So to the extent any of you and our program management staff on the government side can assist us with information that will allow us to plan more effectively to keep these production lines that we have worked so hard to get in place and ramped up to maximum speed, to keep them going for as long as the MRAP need requires, that would be very, very helpful in executing the balance of the requirements for this program.

Mr. ABERCROMBIE. Thank you, Mr. Chairman.

Mr. TAYLOR. The Chair yields to the gentleman from Maryland, Mr. Bartlett.

Mr. BARTLETT. Mr. Chairman, I would just like to note what I meant by a country being at war.

We had daylight savings time in World War II so you could grow a Victory garden, and if you did not you weren't a patriot. Everyone I knew had a Victory garden. There were no automobiles made in 1943, 1944, and 1945. Gasoline was rationed. Sugar was rationed. We saved our household grease and took it to a central repository. Everybody knew we were at war because everybody sacrificed.

Today, I am afraid that the images of war that we see on the television has little more relevance to many of us than the images on a video game. I think it is quite unfortunate that our military and our military families are bearing such a heavy burden and life continues just as it did before for most of the citizens of our country.

I hope the next time we are in a war, Mr. Chairman, that our country is at war, and not just our military and our military families. Thank you.

Mr. TAYLOR. The Chair thanks the gentleman from Maryland.

Captain Hoover, and again I want to thank him for his service to our Nation. But he didn't get to be a captain by saying, "I can't do it," or, "We can't do it." He was rewarded for getting things done and saying he could get things done, and that is why he has achieved the very high rank.

I have got to admit that, having seen that facility, I remain concerned that when each of your organizations is up to full capacity, that they will lack the capacity to keep up with you, and, therefore, the vehicles won't be delivered on time. I hope I am wrong.

My question to each of your organizations is what could your organization do that is now being done at SPAWAR in an effort to minimize what has to happen there, speed up production, make

best use of your facilities? I will open it up to any of you or all of you.

Mr. MASSICOTTE. If I may.

Mr. TAYLOR. Yes, sir, Mr. Massicotte.

Mr. MASSICOTTE. We have worked with Captain Hoover and his team up at SPAWAR in a very collaborative effort, and one of the things that we were able to do with our engineering groups that have been up there is that we have been able to integrate back into the manufacturing processes at our West Point facility the things that they were doing. And I echo what he said earlier: The process is improving, and I am sure that the vehicles are getting through that operation much quicker than they were.

With regard to could we do more, we would be happy to look at it and see what opportunities there are, whether or not the entire integration could be done. We would be happy to look at that and come back to Paul Mann and his group and work with him and see what could be done. I am sure there is more that could be done. Right now we are willing to step up and do what is needed. So, right now we are integrating that kind of tech into our vehicle today in the process. And whether or not we take on the additional load of doing what they are doing up at SPAWAR, that is going to have to be done through the program office.

Mr. TAYLOR. Mr. McGilton, just one "for instance" was for some of the variants that they had to go back and use an acetylene torch or possibly plasma cutter to make some holes in the vehicle. They expressed the problem that, well, we have to now wait to put the wiring harness on later so they wouldn't burn it during this process. To what extent did they make their predicaments your knowledge; and to what extent did they include you in that process and give you or any of you vendors the opportunity to say, we can do that at the factory?

Mr. MASSICOTTE. Sir, we are doing that. And I think with Captain Hoover's people, that was one of the things that we looked at together. If we are sending a vehicle up there, and they are taking it apart to install their equipment, we are now integrating their equipment or that harness in our vehicle before it leaves the factory. So I think that kind of integration and the cooperation that we are getting with Captain Hoover's team is working quite well.

Ms. HUDSON. Just like Mr. Massicotte's team, we have been working with the SPAWAR people as well, moving work that was done there back into the factory, and that is an ongoing dialogue as we all learn with these initial vehicles what can be done better earlier in the process.

Mr. TAYLOR. Ms. Hudson, let me ask you a real simple question. Is there anyone from your organization who is given access to what is done at SPAWAR who can actually walk that assembly line and say, we could have done that back at the factory?

Ms. HUDSON. We have had a number of people at SPAWAR working with the team there, and suggestions have come out of that activity back into the factory.

Mr. TAYLOR. Would other members of the panel wish to comment on that?

Mr. MCGILTON. We have the luxury of being just down the road from SPAWAR, as you know, and we have a manufacturing engi-

neer that is either full-time there or near full-time there, and his only job is to identify opportunities like that and bring them back. We have processed within the last 30 days—I think we initiated 9 engineering change requests, 7 of which, I believe, have been implemented, 2 of which may be implemented by the time we get back. And every time we find one, we will put it in. We have someone assigned to do just exactly that.

Mr. TAYLOR. Mr. Heebner.

Mr. HEEBNER. I think the particular motivation that we have is to make sure that in the processes that are performed at SPAWAR, that there is not any disassembly work done and then reassembly required. Trying to minimize that.

Mr. TAYLOR. I can assure you, there is disassembly going on. There are holes being cut, and then things get welded, things have to be reassembled, things have to be repainted, which is what leads me to believe many of these things should be getting done at your facilities before they get to Charleston. So my question is to what extent are you, the manufacturer, given an opportunity to make that observation and fix that problem before it gets to Charleston?

Mr. HEEBNER. My comments on a direct answer to that would be exactly parallel with Mr. McGilton's, because we are joint-ventured to produce the same Cougar vehicle, so we use the same processes. And as he suggested, there have been a number of engineering changes already in place because of that, which simply reflects the fact that there is a process in place to do that. And the integration or interaction between the SPAWAR people and our own people is not inhibitive in any way that I am aware of.

Mr. TAYLOR. The Chair recognizes the gentleman from South Carolina Mr. Wilson.

Mr. WILSON. Thank you, Mr. Chairman. And I regret I had to run off to another meeting, but wanted to come back. And I particularly wanted to come back, Mr. Chairman, because I appreciate the private sector, how they have really come to play such an effort to protect our troops. And I have actually visited the facilities of BAE and am really grateful. I was present, Mr. Chairman, at the 25th anniversary of the BAE existence. It is adjacent to the district I represent in Aiken. Wonderful people, dedicated, working there. And then Force Protection, I feel like I was with them when they were born. And so I have had the privilege of even going ahead of the Chairman to drive one of the Cougars and Buffalos. It is hard to get ahead of Chairman Taylor, but I was. But we appreciate so much, and General Dynamics and all of what you are doing to protect our troops and provide for protection.

There has been discussion about the monthly production contracts and working with SPAWARs and how to avoid the end-of-the-month congestion. Is there any way to move toward weekly production on contracts or even daily? And any of you who could answer that would be good.

Mr. MCGILTON. I would be glad to answer that.

Earlier in the meeting we provided the statistics to show how much of an improvement there had been to get away from the hockey puck production delivery. Last month, by the middle of the month. We delivered half of our vehicles, exactly what we should have done.

In Force Protection, we are moving in the direction of doing weekly and even daily production schedules. It is fraught with a lot of risk when you do that, because on any given day, if anything goes wrong, it is going to be a really bad day, and there is going to be a lot of visibility relative to what went wrong on that day. That is not necessarily a bad thing. All of us in manufacturing understand that every day when you go in it is a street fight. The number of variables that can work against you, any one of them can stop the entire system. So we are willing to do it. That is the direction we are working in.

But just the act of going to a daily production schedule won't solve the problems that are created. You have got to modify the processes that make it possible to do a daily production schedule. But that is exactly what we are doing. That is what all of us are trying to do. There is nothing that would make us happier than every day when we go in, everything happens on autopilot. It just isn't the case when you bring in a new technology with as many variables as we have as fast as we have to bring them together.

So any resistance to doing it is not founded in a resistance to do it, it is that we may not in every case have our entire supply base in a state that they can operate that way. And there are varying processes. You don't make steel by the day; you make steel by the heat. So somebodyis going to deliver you 10,000 pounds of steel, and that has all got to be processed. And so it is kind of the Catch–22. Some things come to you in big bulks and you have got to manage them, and sometimes the bulks don't show up. But there certainly isn't any resistance to doing it from our side, but there certainly is a lot of difficulty in doing it.

We are not a mature industry, and that is why it is difficult to set up the daily consistent process. If we were building Hondas or Camrys, and we had five years to design the processes and get the supply chain in place, it would be a snap. It is not that we are unaware that that is a better way to run a business, it is that the time in order to get the stability necessary to let your business operate that way has not been afforded to any of us. The war didn't wait for us to do it.

Mr. WILSON. And, Mr. McGilton, you itemized the different vehicles that have been provided to American forces, Iraqi forces, allied coalition forces, the different types of vehicles. And I think, I know it would be reassuring to persons who have young people serving overseas; can you tell us how the performance of your vehicles have been that have been deployed?

Mr. MCGILTON. I have certain restrictions placed on me about discussions of the performance of the vehicles. I think everybody in this room can understand why.

Our belief and understanding is that within our vehicles, when properly used, properly deployed, and the people properly belted in, the survivability rate is amazingly high. I can't get any more precision than that. It is amazingly high. We are very proud of our record of survivability, and we won't compromise in that measurement of interest in any way, shape, or form.

The second thing I will say relative to the performance of the vehicle; thus far, we have been able to enjoy a 95 percent vehicle readiness rate. That is extremely important, because these vehicles

are only valuable when they are available. The design of our vehicles allows the vehicle to experience a blast, to sacrifice the external components. A truck comes and picks up the capsule, but we protect the engine, the transmission, the transfer case, and the important drive line items. We take it back to the motor pool, and then the field service reps from our company and those of our associates restore that vehicle and put the vehicle back into service. Very few of our vehicles have been taken completely out of service. So the total cost to operate a ballistic capsule-type design is significantly less than any other style of vehicle because it is reusable.

Mr. WILSON. Again, I thank all of you for what you are doing to protect the American and coalition forces. Thank you very much.

Mr. TAYLOR. I thank the gentleman from South Carolina.

I got the impression that Ms. Hudson wanted to say something.

Ms. HUDSON. I was just going to comment on the weekly deliveries versus the monthly deliveries. And Mr. McGilton's comments were absolutely correct. Early on we were not in a steady production flow. It was difficult to get material in, and I believe that exacerbated the problem you mentioned. But I did want to state that on our Caiman, MRAP system, we started performing to a weekly delivery schedule in September, and we plan to go to a weekly delivery schedule in February on our RG33 variant as well. So it is important to us to have a steady flow in the factory, as important as it is to our customers and to SPAWAR in terms of receiving the vehicles. So that is the direction we are heading in.

Mr. TAYLOR. Mr. Heebner.

Mr. HEEBNER. Mr. Chairman, if I might add just a slightly different aspect in response to that question, and I do this both for the committee's benefit and also for the employees who work on MRAP vehicles around the country and, frankly, around the world, and that is we do not need additional motivation to build these vehicles as quickly as we possibly can. Our employees are committed to doing this as rapidly as it is possible.

What happens on occasion is that we will nearly complete a vehicle, and there will be a component that is deficient because the supply system hasn't gotten there quite on the schedule that we had anticipated, and that occasionally results in the delivery to SPAWAR of a significant number of vehicles at one time. Obviously, we try to minimize that. But our commitment and the commitment of our employees is to move just as quickly as we possibly can. And, believe me, we are motivated to do that, and it would not take a different type of contract to cause us to do that.

Mr. TAYLOR. I very much appreciate that, which leads to one of the final questions.

Former Chairman Hunter, I think, did this committee a very good service in looking into the delays in the up-armored Humvees. One of the things that he and the staffers that he dispatched to look into the problem discovered was that in many instances the supplier did not know that what they were making was going into something that was going to save the lives of young Americans in Iraq and Afghanistan. And, quite frankly, the committee was very disappointed to hear that.

Since that problem has already happened once, we sure don't want it to happen again. Are you confident that each of your sup-

pliers is aware of what that component is expected to do, why it is there, why we need it, and why they should be given a priority?

And I hope you are also aware that our President and the Secretary of Defense has the legal authority right now to walk into any factory in the United States of America and say, the troops need this, and I want you to put it to the top of the list. And we want you to know that. I am sure you already do. But we want each of our suppliers involved in this program to know that. And we want this committee to be notified if that is the message we need to relay to the Secretary of Defense or the President to make sure that you get the things that you need to make the product that is so important to troops.

So I guess going back to the first question: Do you feel like your suppliers know the importance of what they are doing and how important the product you are making is for the troops?

Mr. HEEBNER. Mr. Chairman, I don't believe I could answer that question with certainty for all of our suppliers. What I can tell you is that in those areas where we have felt challenged for the supply of specific components, the fact that these parts are a part of the MRAP program and the importance of velocity in developing and completing these vehicles has been communicated throughout our supply chain, and that we get a very positive and prompt response from any inquiries we have about the conditions of the supply base.

Ms. HUDSON. Mr. Chairman, if I may add as well, given that this program has a DX rating, the most important rating in the country, and we have had the opportunity to work with our suppliers on the implementation of the important priority through a contractual arrangement and also through informal arrangements, part of that is a discussion of why we are doing what we do.

At BAE, we have a saying: We protect those that protect us, and that the only thing that matters is doing the best thing for the troops in the field. We talk about that every day. Our employees embrace it, and our supply chain embraces it as well.

We do know why we are doing what we do, and it matters. We talk every day about what we do is saving lives in theater and protecting family members and friends, and it is ingrained in each and every one of us.

And to Mr. Bartlett's comments. The general public may not feel like we are at war, but I can assure you that we at BAE Systems do. We have people that haven't had a day off since the day MRAP started. We work around the clock, 7 days a week, and there is absolutely no question that we understand the importance.

Mr. TAYLOR. Thank you.

Mr. MASSICOTTE. We supply a lot of our product that we put into the vehicles. So as it goes across the various divisions within the corporation, we absolutely know the importance of this program. When you reach out beyond that to the supply base, our dealer counsel and the people that we work with in the supply community, we make sure that they understand what the parts they are supplying and the DX rating, as you stated, is absolutely out there in front of the curve of any production material that we use today. We have a solid supply chain behind us, and right now, just getting the production base up to speed at the levels that we talked about

earlier to get to the higher levels of production is really all we have to do.

Mr. TAYLOR. To what extent—now that the vehicles are being deployed and hopefully will be deployed in much larger numbers, what is your mechanism for staying in touch with the field so that, as things wear out, be it tires, ball joints, whatever, as things wear out, that the factory becomes aware of that and can replace those things in a timely manner? What do you have in place to make sure that that happens?

Mr. MCGILTON. Currently Force Protection alone has approximately 200 field service reps in theater. We have in excess—I believe we have almost $100 million in inventory in our warehouse awaiting to be shipped at any time it is requested. We cross-trained with all of our partners. General Dynamics have an enormous infrastructure of technical people to do the restoration on the vehicles. We can't think of another thing that we could do to address the issue. It is those actions that have allowed us to keep our 95 percent readiness rate. And we are not happy with 95 percent, so we are going to continue to improve things. But it is the relationship that we have with our partners that have this massive reach that allows us to accomplish that.

I would also like to go back and address what Mr. Heebner said; your question, and then one thing that Mr. Heebner said. The way we made sure that all of our suppliers understand how important it is, we had a supplier conference and we brought in 100 percent of our suppliers. And I didn't want their salesmen. I brought in someone that was in a significant position of management, and they spent a day with us. And we explained to them what we were doing; we showed them videotapes; we explained to them about our theory and our philosophy for running our business, what part they played in it, and how they could make our entire system fail. No matter how big or small the part was that they manufactured, the entire system stops if they don't perform. We spent a great deal doing that.

I would like to talk about Mr. Heebner's statement about motivation. At one point in the program not too long ago, people were concerned that we weren't motivated enough at Force Protection. And in an effort to get us to work faster and harder, the United States Government saw its way fit to offer a $1 million incentive payment if we would improve our performance. I am afraid I am going to cause significant chaos, at the risk of challenging my relationship with Mr. Dillon. When we got the offer, we felt insulted. And what we said was that we weren't interested in an incentive; if you needed us to do more, just tell us, and we will do everything we can. We are already doing everything we can.

The more that they asked us to do we were able to accomplish. And they came back to us again and said, you are causing a problem because you won't agree to accept a contract that has an incentive built into it. After a lot of deliberation, I agreed that I would accept a contract with the offer of the $1 million acceleration incentive in it as long as I didn't have to invoice for the $1 million after I accelerated.

So we accelerated, we improved the delivery, and we still to this day have not submitted the invoice to claim the $1 million. We were going to do it anyway. The money didn't make any difference.

Ms. HUDSON. With regard to getting feedback from the field, we have an established infrastructure for the Bradley fighting vehicle with field service reps in theater. We are also supplying field service reps for the MRAP program in theater as well. And even though we have multiple variants of MRAP, we have one program manager in charge of all the BAE Systems field service reps working on MRAP. So we get daily feedback on what is happening in theater so we know if we need to make any changes or fixes into our manufacturing processes or our design.

And I might also add that we have had two of our senior executives in Iraq in the last month to personally assess the situation and make sure there were no barriers that we couldn't control and in having an effective infrastructure set up in Iraq.

Mr. TAYLOR. Again, I do want to thank each of you for what you are doing. I very much appreciate your walking this committee and the American people through the importance of this program, how we are addressing it. I want to extend the invitation that anything that this committee can do to help you be more productive as you encounter challenges, we want to extend that invitation.

And, last, I want to apologize. I misspoke earlier. I am certain that Sean Cooley wasn't the first Mississippi guardsman to die in Operation Iraqi Freedom. And any pain I may have caused to his family or any other family by misspeaking, I want to apologize now.

So with that, this committee stands adjourned.

[Whereupon, at 5:30 p.m., the subcommittee was adjourned.]

A P P E N D I X

November 8, 2007

PREPARED STATEMENTS SUBMITTED FOR THE RECORD

NOVEMBER 8, 2007

HOLD UNTIL RELEASED
BY THE COMMITTEE

STATEMENT

HONORABLE JOHN J. YOUNG, JR.
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MR. BILL GREENWALT
DEPUTY UNDER SECRETARY OF DEFENSE FOR INDUSTRIAL POLICY
CAPTAIN CLOYES HOOVER, UNITED STATES NAVY
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BEFORE THE SUBCOMMITTEES ON
SEAPOWER AND EXPEDITIONARY FORCES
AND
AIR AND LAND FORCES
OF THE HOUSE ARMED SERVICES COMMITTEE

November 8, 2007

Mr. Chairmen, distinguished members of the Subcommittees, thank you for the opportunity to appear before you again to discuss the Mine Resistant Ambush Protected (MRAP) vehicle program. Since I appeared before these Committees back in July, there have been countless man-hours spent across the Department to not only accelerate the delivery of these vehicles and deploy them to our troops as quickly as possible but also to ensure the quality and effectiveness of these vehicles is kept at a high level in theater. We appreciate the extraordinary steps Congress has taken to support the Department's efforts to accelerate the MRAP program. As a result of the combined efforts of the government and industry, there are over 563 MRAP vehicles fielded in theater, and the number is now increasing everyday.

As you requested, I have with me today Mr. Bill Greenwalt, the Deputy Under Secretary of Defense for Industrial Policy, and Captain "Red" Hoover representing the Space and Naval Warfare Systems Center. Their teams, and additional government offices, have been pivotal in our efforts to accelerate this program over the past few months. In fact, since the Secretary of Defense made MRAP his top acquisition priority on May 30th, the MRAP Joint Program Office team and our industry partners have aggressively pursued one objective: "get as many of these vehicles to our Soldiers and Marines in the field as is possible in the next several months."

Overview

Since July, the scope of this program has increased dramatically. We have placed delivery orders for 2,400 more vehicles, bringing the Department to a total of 8,815 vehicles. We have obligated nearly $200 million dollars to increase the capacity and availability for specialty steel products. We have grown the capacity of the Space and Naval Warfare Systems Center to integrate Government Furnished Equipment into MRAP's before transporting them to theater. Our industry partners have continued to lean forward, buying materials in advance of contract delivery orders and at risk, in order to accelerate MRAP vehicle deliveries. We continue to learn, but I can assure you that we are aligned in our efforts to deliver MRAP's to Iraq that provide greater safety and survivability for United States forces.

The continued commitment of your Committees and the Congress has allowed us to achieve important benchmarks in fielding MRAP vehicles. We were able to exercise the capacity of industry only because the Congress provided $5.4 billion in Fiscal Year 2007 and approved $5.2 billion in the Fiscal Year 2008 Continuing Resolution. As you know, the President has requested a total of $16.8 billion in the Fiscal Year 08 through Supplemental Budget Requests and Budget Amendments. This Fiscal Year 2008 funding provision allowed us to place an additional 2,400 vehicles on contract within days in order to maintain MRAP procurement momentum, giving industry the capital they needed to keep the supply of components and raw materials available for MRAP production in the

coming months. In December 2006, we had an industrial capacity to build less than ten MRAP vehicles per month. When I appeared before you in July, we expected delivery of 154 vehicles for that month. I am pleased to report that this team produced 161 vehicles in July and over 500 vehicles in August and September combined. Additionally, between October 1st and November 4th we have taken delivery of more than 500 vehicles. We are making steady progress toward our goal of more than 1,000 per month by the end of the calendar year. Our acquisition strategy, laid out about this time last year with confidence in industry's ability and willingness to commit themselves to this aggressive program, has served us well by enabling the program to grow commensurate with industry's ability to produce.

The final requirements and inventory objective for MRAP vehicles are continuing to evolve and grow in response to operational needs. When I appeared before these committees in July, the Joint Requirements Oversight Council (JROC) validated requirement dated May 10th was for 7,774 vehicles. There was also an interim JROC decision on July 11th to produce as many as industry could provide by the end of calendar year 2007. This requirement resulted in the planning figure of 8,000 MRAP's for the July Fiscal Year 08 GWOT Budget Amendment request for $5.3 billion. On September 5th, the JROC validated a total requirement of 15,274 MRAP's for fielding, to support the Army's interim requirement for 10,000 vehicles. The Department requested an additional $11.0B in the October Fiscal Year 2008 GWOT Budget Amendment. These requirements

will continue to be reviewed as MRAP's enter service and troops evaluate their effectiveness.

Industrial Capacity

One of the first efforts of the Task Force was to determine if there were potential industrial bottlenecks that could limit the MRAP vehicle production rate. In April 2007, the Defense Contract Management Agency (DCMA) Industrial Analysis Center issued the first MRAP Vehicle Industrial Capabilities Assessment. The goal was to make an initial assessment of the industrial base maximum capacity for MRAP vehicle production. The Secretary of Defense approved a DX rating for the MRAP program on June 1, 2007 to assure priority access to available material. DX ratings provide the most important DoD programs priority access to scarce production resources; however, they do not resolve fundamental production capacity shortfalls. Industry leaned forward to increase their capacity in several areas by teaming, renting and buying new space and capital equipment and engaging their subcontractors to ensure the subcomponents were ordered and received in a manner that supported the steep ramp in production planned for the coming months.

In July, Mr. Greenwalt tasked DCMA to update its study and conduct an Industrial Capability Assessment on MRAP prime contractors and their subcontractors to determine production capacity and delivery capabilities necessary to meet a goal of producing 1,300 MRAP's per month starting in December 2007. The ICA was to also provide information, conclusions and

recommendations supporting the MRAP Acquisition Strategy. The assessment, completed in September, concluded that industry's production capability in December 2007 should be between 1,000 and 1,300 per month depending on many factors, a capacity that is in line with our planned production of 1,196 vehicles.

I am pleased to report that we have made substantial progress on two primary bottlenecks – tires and steel – highlighted in both the April and September industrial assessments. When I was here before you in July, production capacity of tires for MRAP class vehicles was less than 1,000 tires per month. Through the efforts of several DoD organizations and the tire manufacturers, MRAP vehicle tire capacity will increase during January 2008 to about 17,000 tires per month with the addition of Goodyear as a second source and the addition of more tire molds at both Michelin and Goodyear. This production rate should provide sufficient capacity to meet projected MRAP ramp rates, and to sustain the vehicles in the field. The entire team, including the Office of the Secretary of Defense, the Defense Logistics Agency, and the MRAP Joint Program Office, worked together to ensure that tire production capacity and rate issues now appear manageable.

Production capacity for armor plate and high strength steel plate continue to be a concern. The total DoD demand for steel of approximately 21,000 tons per month is only a fraction of the United States production of 8,000,000 tons per month. However, the Defense Department has unique, niche requirements for armor steel plate and thin gauge, quenched and tempered steel. These specialty steels require unique processes and special equipment which are not available at

plants producing commercial grade steel for the global market. This demand for specialty steel products at high volume production rates has created spot capacity shortages that affect other defense programs. The Department's Priority Allocation of Industrial Resources (PAIR) Task Force is managing these industrial issues through special priority assistance and continued industry engagement. With their assistance, we have been able to build capacity for specialty steel and stabilize production rates, mitigating much of the potential material shortfall in steel plate. When the MRAP program began, compliant domestic sources were able to produce about 8,400 tons of this specialty steel per month. We've made slight specification changes to increase throughput and encouraged steel producers to make capital investments.

In the cases where domestic source restrictions have limited our access to the steel we need, we have used the waiver processes available to us to tap non-compliant domestic sources as well as reliable non-domestic sources.

10 U.S.C. section 2533b prohibits DoD from procuring end items, or components thereof, containing specialty metals not melted or produced in the United States. Section 2533b contains several exceptions, one of which states that the prohibition does "not apply to procurements outside the United States in support of combat operations or in support of contingency operations." On May 22, 2007, Dr. Delores Etter, the Navy Acquisition Executive formally determined that this exception applied to MRAP vehicles supporting ongoing contingency operations in Southwest Asia and the Middle East; and that the exception also

applied to MRAP vehicles not placed in theater but used to permit vehicle testing and/or vehicle operator or troop training. (This exception was not invoked for other ground vehicle programs such as Stryker and Bradley.) Section 8024 of the FY 2007 DoD Appropriations Act (P.L. 109-289) continued a domestic source restriction contained in previous yearly Appropriations Acts that prohibited procurement of carbon, alloy or armor steel plate for use in any Government-owned facility or property under DoD control that is not melted and rolled in the United States or Canada. The Secretary of the military department may waive this restriction on a case-by-case basis by certifying in writing to the House and Senate Appropriations Committees that adequate domestic supplies are not available to meet DoD requirements on a timely basis and that such an acquisition must be made to acquire capability for national security purposes. Various armor kits for myriad DoD vehicle programs are being acquired by and/or fabricated in Government facilities (for example, Rock Island Arsenal). On Oct 1, 2007, Secretary of the Army Pete Geren made such a determination for armor steel plates for Explosively Formed Penetrator armor kits for five variants of MRAP vehicles, four variants of Route Clearance Vehicles, Stryker, Bradley, the Armored Security Vehicle, and the High Mobility Multi-purpose Wheeled Vehicle (HMMWV). On Oct 23, 2007, Secretary Geren made a similar determination for Stryker Improvised Explosive Device defeat armor.

We currently have access to about 20,900 tons per month of armor steel plate and thin gauge, quenched and tempered steel. This supply essentially meets

our demand. Pending finalization of steel requirements for MRAP explosive formed penetrator armor kits, we project that there will be sufficient steel production capacity to ensure all DoD programs are able to continue to provide critical equipment to our Soldiers, Sailors, Airmen and Marines.

As I mentioned previously, there are many partners in the MRAP Enterprise. I would like to take this opportunity to thank all of our industry partners, down to the subcomponent level, for the outstanding support and patriotism they have shown to make this program a success. In addition to those that have been mentioned, companies like Cummins, Caterpillar, Allison Transmission, ArvinMeritor, Cushman, Axle Tech, Eagan & McAllister and Associates, C.E. Neihoff, Hutchinson Industries, and many others, make the critical components that are the building blocks for these impressive vehicles. Without their commitment, hard work, and willingness to take risk, this program would not be succeeding.

Government Furnished Equipment

Integral to the effectiveness of the MRAP vehicles is the suite of Government Furnished Equipment (GFE) that is installed on each vehicle after it is accepted from the manufacturers. GFE includes radio frequency jammers, intra-vehicle communication systems, Blue Force Tracker, and other items. The integration of these critical items takes place at the Space and Naval Warfare Systems Center in Charleston, South Carolina. As I mentioned before, I am joined this afternoon by Captain "Red" Hoover, Commanding Officer of that activity and

would like to take this opportunity to commend all the members of his team for the determination, professionalism, and flexibility they exhibit each day as they approach this daunting task. Since I testified before these Committees in July, we have made good progress in our efforts to streamline the process and standardize the equipment installed into MRAP's. Captain Hoover and his team have used Lean Six-Sigma processes to capture the elements of the integration process and streamline them through prototyping, training and visual cueing of steps. Leaders from the Army and Marine Corps have agreed to standardize GFE where practical and also improved radio and jammer installation kit designs. As you can imagine, with seven different manufacturers and multi-Service configurations, the task of integration continues to be complex. Yet, the GFE integration line at SPAWAR continues to increase capacity toward their ultimate goal of integrating 50 vehicles a day.

Reflected in our most recent production orders is the experience we gained from prototyping and communicating with the vehicle manufacturers. In the case of one manufacturer, we were able to identify potential for saving over 10 hours of integration time (per vehicle) upon implementation of minor modifications by the vehicle manufacturer at the factory before shipping. To promote the open and timely sharing of information, we have manufacturer personnel on site at the integration line at SPAWAR. MRAP Joint Program Office personnel are making regular trips to the manufacturers facilities, and a network of professionals from

the Defense Contract Management Agency are assisting at all sites. This has truly been a collaborative effort by all members of the MRAP Enterprise.

EFP Protection

The Defense Department is using an innovative and expedited test and evaluation methodology for the existing MRAP designs. With oversight from the Director, Operational Test and Evaluation, the U.S. Army Aberdeen Test Center continues to "blaze the trail" for combined developmental and operational test and evaluation of what are essentially, commercial off-the-shelf vehicles, ensuring they are survivable and usable, supporting rapid procurement and fielding, and meeting statutory requirements for live fire test and evaluation. This test strategy continues to be extraordinarily successful and has allowed us to qualify vehicles and confidently make production awards with unprecedented speed.

Of primary concern to Secretary Gates and other leaders in this effort has been the emerging threat to our troops from Explosively Formed Penetrators (EFPs). The U.S. Army has done extensive research and development to counter this threat including modeling and simulation, as well as prototype testing and re-testing of each manufacturer's vehicles to design solutions that will quickly react to the evolving threat. The Department established the MRAP Expedient Armor Program to counter this threat, and this is a good opportunity to recognize the entire community for their dedicated support. The MRAP Joint Program Office has leveraged support from the U.S. Army Research Lab (ARL), U.S. Army Tank

Automotive Research Development and Engineering Center (TARDEC), the Army Test Center, our depots, and industry partners.

Our goal has always been to provide the best possible protection against the most lethal threat. Currently, a limiting factor is vehicle payload and these "up-armor" kits may weigh between 4,000 and 13,000 lbs. We strive to maximize survivability while limiting performance degradation of the MRAP vehicle. This task will be accomplished by determining acceptable payloads based on chassis and power-train limitations, then optimizing armor placement to maximize crew survivability through the evaluation of over 20 courses of action.

The first MRAP vehicles with installed, enhanced EFP kits are undergoing testing. Three of these vehicles dedicated to EFP protection have been received, and the respective kit packages are currently in various stages of engineering (design, fabrication and prototype efforts), depending on the MRAP vendor variant. To expedite the total process, an engineer team from Rock Island Arsenal is working hand in hand with our TARDEC design and fabrication teams. We continually search for ways to reduce cycle time such as providing our vehicle manufactures with base material and integrating as much of the kit on the vehicle at the production facility as possible. We anticipate building our first kits from this initial design at Rock Island Arsenal in the later part of November. The Blue Grass Army and USMC Albany Depots are also being explored to support our kit build efforts.

One of the components of expedient armor requires specialty steel which is processed into add-on armor material. These material designs, commonly referred to as P900 or XPA, are made at only a few foundries. We have teamed with the ARL in exploiting foundries for P900 plate. As a result, we have awarded $52.1 million for the production of P900 and XPA plate and high hard plate. We anticipate an award in mid-November of an additional $31 million for P900 material (estimated at 50,000 plates). The actions were funded from the $200 million appropriated for steel procurement. Aggressive procurement actions have made it possible to purchase 9,200 tons of high hard steel and 5,250 tons of aluminum, both essential elements of P900 or XPA. All three of these components will start to be delivered to Rock Island Arsenal mid-November.

In addition to designing EFP protection for all the vehicles currently in production, the MRAP Joint Program Office issued a solicitation commonly referred to as MRAP II, which includes enhanced performance specifications for vehicles and components. We are currently in the proposal evaluation phase for MRAP II, and I look forward to sharing those results with you after we have completed the required steps.

Transportation and Sustainment

The MRAP Enterprise has also made significant progress in MRAP transportation and sustainment. We are currently transporting MRAP's to theater by air. United States Transportation Command (TRANSCOM) has been extraordinarily flexible and responsive while we continue to work toward a steady,

predicable flow of vehicles from production through integration. Based on projected production and integration output increases, the first bi-monthly surface (sea) shipment loaded in Charleston on the 2nd of November and is projected to arrive in theater on or about the 26th of November. About 50 MRAP's will be shipped to exercise our ability to transport them by sea and process them from the sea port to the battlefield. We will continue to use air assets in the months to come but much larger total capacity exists by using ships in a concurrent role.

On the October 29th the MRAP Joint Program Office and the Commander, Tank and Automotive Command co-hosted an MRAP Fielding and Logistics Review. Attended by over 200 DoD officials, including some senior officials, the review spanned the entire joint logistics structure for MRAP's including in-theater management, maintenance concepts, and integrated supply chain. From the inception of this program, the logistics community, led by Mr. Jack Bell, Deputy Under Secretary of Defense (Logistics and Material Readiness), and composed of thousands of dedicated professionals, has been focused on the establishment and sustainment of a high level of material readiness of the MRAP vehicles that we have already fielded and will continue to field in the future. While the fielded MRAP population is still relatively small and consists of primarily vehicles from one manufacturer, Force Protection Industries, Inc., the readiness rate of the MRAP's delivered to operating units to date has ranged from 93 percent to 97 percent – significantly above the 90 percent material readiness target established for the MRAP vehicle fleet.

The rapid fielding of MRAP's, combined with the relatively large number of manufacturers and corresponding vehicle types and variants, means that configuration control, logistics support, and other sustainment and infrastructure issues have increased the complexity and challenges of sustaining the MRAP fleet. Key activities being addressed on an accelerated basis include the areas of technical data packages and other types of documentation and automation, training, wholesale level support, in-theater management, depot and field level maintenance, and integrated supply chain management. To manage this very complex effort, the MRAP Joint Program Office has altered the original Contractor Logistics Support (CLS)-based sustainment strategy and is implementing a hybrid industry/organic partnership equipment support strategy to ensure parts and vehicle availability through the existing in theater infrastructure and maintenance support/resource structure and capability for all varieties of MRAP's.

The following key actions have been or are being taken to ensure the continued high level material readiness and corresponding equipment availability over time of the fielded MRAP's:

- Establishment of a formal joint program office forward organization in-theater to assist in equipment fielding;
- Identification of four regional support activities and an additional five fielding sites in-theater;

- Acceleration of the development of appropriate technical data packages, manuals, and other logistics support documentation for all MRAP vehicle types and variants;
- Establishment of "MRAP University" at Red River Army Depot, Texas to provide training on the operational use and maintenance of MRAP's;
- Agreements between MRAP manufacturers so that Field Service Representatives (FSR's) provided under the CLS contract can provide support to any MRAP variant;
- Initiated action to obtain the technical data necessary for full cataloguing of MRAP parts in DoD supply systems;
- Establishment of a formal process for logistics feedback from Field Service Representatives in-theater and translation of the resulting logistics requirements into completed contract actions with OEM's and Depots;
- Intensified efforts to assist vendors in expediting parts deliveries from suppliers and ensuring appropriate plans are in place to support the decisions (when necessary) of choosing between production and sustainment priorities;
- Acceleration of engineering change proposals generated during electronic prototype back to the vehicle manufacturer for execution; and
- Development of a program-wide configuration management and control database that accurately tracks the configuration of each vehicle.

The actions I have outlined above are critical to the overall success of the MRAP Joint Program. While we are making good progress, we continue to stretch what is possible on all fronts. We have several challenges in quality, reliability, maintenance and supply, in the short term. Maintainability and supportability, including prioritization of parts between production and sustainment, will be key factors in providing our warfighters the maximum number of MRAP's that are available for mission execution. We are anticipating these issues and taking action. Even with these challenges, I believe that our joint sustainment approach has us on the right track.

Summary

Finally, and most importantly, the MRAP Enterprise continues to address the challenges of a new program allowing us to place orders and deliver MRAP vehicles during calendar year 2007. The reprogramming action, Budget Amendments and Continuing Resolution funding provided by the Congress have been vital to this goal. Most recently, I approved the re-designation of the MRAP Joint Program to an ACAT 1D acquisition program and approved the latest production awards totaling 2,400 additional MRAP's to be produced in early calendar year 2008.

We have continued to challenge industry to produce as many vehicles as they can, as quickly as they can. We have integrated essential GFE with ever increasing speed, used an innovative joint testing regimen, adjusted to an evolving threat and executed a logistics and sustainment strategy that is designed for

success. We executed plans to mitigate raw material shortages by incentivizing the industrial base that is needed to produce these vehicles. We have improved commonality of GFE equipment, streamlined the GFE installation process, ramped up MRAP vehicle transportation options, and executed an aggressive fielded vehicle sustainment strategy.

When I appeared before you in July, I was speaking to you as the head of the newly formed MRAP Task Force. I appear before you today, joined by two other key partners in the MRAP Enterprise, not only as the head of the Task Force but more importantly as the Acting Defense Acquisition Executive and Milestone Decision Authority for this ACAT 1D program. I continue to be amazed by the tenacity and professionalism of everyone involved with the MRAP Joint Program including the Services, DoD civilians and our industry partners. I am certain now more than ever, ladies and gentlemen, that everyone involved in this effort, both inside and outside the Department, shares the Congress' and Secretary Gates' goal of getting as many MRAP's in the troops' hands as quickly as possible.

The Department's highest priority remains the combat effectiveness and force protection of our troops—ensuring that they have the best training and best equipment available to fight, win, and survive. We are absolutely committed to giving them the best force protection capabilities available: proven, tested and safe.

I would like to thank all the members of the MRAP Enterprise, starting with the Joint Program Office, vehicle manufacturers and their raw material sub-

component suppliers, the men and women of Space and Naval Warfare Systems Center, Charleston, the entire network of transportation professionals represented by TRANSCOM, the vast network of logistics experts from the Pentagon to Iraq, and the talented military and civilian staff in the Services and Office of the Secretary of Defense involved with this program. Finally, I would like to thank you and the other Members of Congress and their staffs for their continued efforts to ensure the success of this vital program. With our continued partnership, we should be able to increase and maintain a high level of production, fielding and sustainment of these life-saving vehicles and provide them to our Soldiers, Sailors, Airmen and Marines.

BAE SYSTEMS

Linda P. Hudson

President
Land & Armaments

Testimony Before The
House Armed Services Committee
Seapower and Expeditionary Forces Subcommittee
Air and Land Forces Subcommittee

November 8, 2007

Linda P. Hudson
President
Land & Armaments
BAE Systems

Linda Hudson assumed the leadership of BAE Systems Land & Armaments Operating Group on January 2, 2007 with her appointment as President. She leads a global land vehicle and armaments business with primary operations in South Africa, Sweden, the United Kingdom and the United States of America.

Prior to joining BAE Systems, she served for seven years as an officer and vice president of the General Dynamics Corporation and she was the President of General Dynamics Armament and Technical Products in Charlotte, NC.

From August 1997 until May 1999, Ms. Hudson was Vice President, Business Development at General Dynamics' corporate headquarters in Falls Church, Virginia. In this position she was responsible for developing and implementing new business growth strategies across the corporation.

Ms. Hudson served as President, General Dynamics Ordnance Systems, from April 1992 through July 1997. As the chief operating officer of this wholly owned subsidiary, Ms. Hudson managed a broad range of products and operated government – owned manufacturing facilities. She led this organization while corporate ownership changed from Martin Marietta to Lockheed Martin and through its subsequent acquisition by General Dynamics.

In November 1985, Ms. Hudson joined Martin Marietta in Orlando, Florida. She held a variety of positions there including Director, Air Defense Production Operations and Program Director, Electro Optical Systems before being appointed to head the Ordnance Corporation in 1992.

Ms. Hudson began her career in 1972 at the Harris Corporation in Melbourne, Florida as a Research and Development Engineer, specializing in satellite and communication systems. She progressed to a Senior Engineering position in Reliability Design Analysis and Component Failure Analysis. In 1976 she joined Ford Aerospace and Communications Corporation in Newport Beach, CA. During her tenure at Ford Aerospace she was a Reliability Engineering Manager, Division Quality Assurance Manager and Air Defense Systems Program Manager.

A graduate of the University of Florida, Ms. Hudson received her bachelor's degree, with honors, in Systems Engineering.

► Introductory Comments

Chairman Taylor and Chairman Abercrombie, ranking members Bartlett and Saxton, distinguished members of these subcommittees, I thank you for the opportunity to appear before you today regarding the Mine Resistant Ambush Protected (MRAP) Systems produced by BAE Systems. Before beginning, on behalf of BAE Systems, I would like to thank the subcommittees and this Congress for your support of the MRAP program. This is a noble endeavor which has brought together a powerful government-industry team to protect our troops in harms way.

The following sections present a brief company overview, a summary of our three MRAP programs currently in production and responses addressing the four areas identified in your October 24, 2007 invitation to testify. The list of federal contracts that BAE Systems Land & Armaments has had with the federal government for the past three years was submitted to the committee under separate cover.

► Company Overview

As the President of BAE Systems' Land & Armaments Operating Group, I proudly speak for our global enterprise and our 18,000 employees. While we are headquartered in Virginia, Land & Armaments operates in 17 states, the United Kingdom, Sweden and the Republic of South Africa. We design, produce, maintain, reset, and upgrade combat vehicles, tactical vehicles, military armaments, naval fire support systems, advanced armor solutions and individual soldier survivability systems for the United States and our allies. Here in the United States, you will recognize many of our products beyond the MRAP; such as the Bradley Fighting Vehicle, the Paladin, the M88 Hercules Recovery Vehicle, the Family of Medium Tactical Vehicles, the M777 Lightweight Howitzer, the Advanced Gun System for DDG1000, and the Marine Corps Amphibious Assault Vehicle. We have played a major role in recent initiatives to improve warfighter survivability by up-armoring HMMMV's and providing advanced body armor on an accelerated schedule. We proudly support the men and women of our Armed Forces.

► **MRAP Product Overview**

On the MRAP Program, BAE Systems is currently under contract to provide the following MRAP variants.

- **RG31** – BAE Systems has been building the RG31 mine resistant vehicle since 1996 in our Land Systems South Africa business. This was one of the original, ground breaking, v-hull systems developed to counter this challenging threat. BAE Systems entered into a business relationship with General Dynamics to market the RG31 in the United States and that agreement continues for the MRAP program. Since 1996, 417 vehicles have been sold to US Forces. Our legacy of designing and manufacturing mine resistant vehicles in South Africa goes back to 1977.

- **RG33** – Building upon our RG31 experience in South Africa, technology was transferred to our Ground Systems business in the US and a next generation mine resistant vehicle was developed by BAE Systems incorporating unprecedented survivability features.

- **Caiman** – In July, 2007 BAE Systems acquired Armor Holdings. This acquisition added an MRAP variant, called Caiman, based upon the design of the US Army's Family of Medium Tactical Vehicles (FMTV) to the BAE Systems portfolio. In addition to meeting the MRAP survivability requirements, this vehicle has been designed to provide parts commonality with the FMTV. This commonality results in proven reliability and ease of supportability with available spare parts and trained field support representatives already in Theater.

In addition to being focused on MRAP production activities, BAE Systems developed, qualified, brought capital tooling online and initiated production of an EFP (Explosively Formed Projectiles) armor solution. This armor is not only applicable to all MRAP vehicles but can be applied to other vehicles in Theater as well.

Recognizing the importance of system sustainment, we have purchased spare parts in advance of contract award and established a single forward deployed BAE Systems Program Manager to support fielding and sustainment activities. Two BAE Systems senior executives traveled into Theater to assess the infrastructure needs of our field service teams and to ensure successful fielding and seamless support to the warfighter. We have actively supported the establishment of MRAP University at the Red River Army Depot and are collaborating with the other MRAP contractors to cross train Field Service Representatives (FSR's).

► **MRAP Scope, Timelines and Funding Adequacy**

As discussed above, BAE Systems Land & Armaments is currently manufacturing the RG31, RG33, and Caiman MRAPs. All three of these variants were designed and developed using internal company funding, including generating requirements and developing company owned technical data packages (although it should be noted that Caiman's automotive design is identical to the FMTV and that Technical Data Package is owned by the Government).

- **RG31** – Land & Armaments is presently under contract to General Dynamics Land Systems (GDLS) to provide RG31s in support of the MRAP program. Therefore, I will defer to my GDLS colleague to provide specific information regarding that contract. To date, Land & Armaments is contracted to supply 624 RG31s to GDLS. In order to maximize production capacity and to accelerate deliveries, Land & Armaments licensed GDLS to build 295 of these

vehicles while the balance is being built in South Africa. Production vehicles are planned to begin delivery this month and be completed in February 2008.

- **RG33** – Land & Armaments is currently under contract to deliver 1,135 RG33s. Thus far, 32 Category I and 77 Category II MRAPs have been delivered. These RG33s are in multiple configurations, to include an ambulance and SOCOM variant. This August, deliveries were completed on the first two delivery orders. These RG33s began arriving in Theater three weeks ago.

  As a newly designed vehicle, the RG33 encountered a number of test anomalies requiring design modification early in the program. Working with the Joint Program Office, those deficiencies were corrected and successfully retested. The need to incorporate those design changes in our concurrent production line caused some initial production delays. The multiple configuration variants of the RG33 also exacerbated the production start-up challenges. However, those problems are now behind us and our production is ramping up as planned. The first RG33 was delivered two months after contract award and five months after the start of design. Current production runs through April, 2008.

- **Caiman** – Land & Armaments started delivering production Caiman vehicles six weeks after contract award in July 2007. Of the 1,174 Caimans under contract, 145 have been delivered. Given the breadth and depth of the automotive, armoring, and manufacturing experience resident within our Mobility and Protection Systems business (formerly Armor Holdings) and the commonality with the on-going FMTV production, the transition to production and subsequent fielding was executed smoothly for Caiman. Without a follow-on contract in place, the ongoing production run will end in February 2008. It should be noted that sufficient capacity exists at our Sealy,

TX facility to meet all known FMTV production requirements in addition to MRAP requirements.

- **Adequacy of Funding** - From Land & Armaments' perspective, funding for the MRAP has been adequate to meet the identified need. Congress, OSD and the Services should be commended for recognizing this critical need to protect our troops in the field. If possible, to achieve and sustain our maximum production rates, it would be helpful to have the following:

  - More insight into planned acquisitions
  - Larger quantities ordered at one time (rather than piece meal orders) – a minimum delivery duration of nine months will avoid the ramp-ups and ramp-downs we presently experience to get better value and responsiveness from our supply chains
  - Orders placed within our lead time windows to preclude unnecessary and wasteful breaks in production
  - Long lead funding for critical items, as currently used on programs like the Bradley Fighting vehicle, in order to mitigate risk and maximize production capacity.

As a point of information, if no further orders are received by early December, the RG33 and Caiman production lines will cease production in April and February 2008, respectively.

► **BAE Systems Industrial Capacity**

Land & Armaments is rapidly ramping up its production capacity at its five principle MRAP manufacturing sites: York, PA; Aiken, SC; Sealy, TX; Fairfield, OH and in Johannesburg, South Africa. The following table depicts the present and planned contract MRAP production rates for our three vehicle variants.

MRAP Variant	Planned Nov 2007 Production	Max monthly production (current contracts)
RG31	60	120 (Feb 2008)
RG33	68	300 (Apr 2008)
Caiman	195	376 (Jan 2008)

Activity is underway to ensure that components of our MRAP variants can be built in all of our major facilities. Planning is in place to allocate production to maximize throughput and deliveries. Additionally, we have used and will continue to use our subcontractor base to augment fabrication and assembly capacity. With six months lead time, the RG33 can be produced at a maximum rate of 400/month and Caiman can be produced at a maximum rate of 700/month. Given sufficient insight into upcoming requirements, Land & Armaments will make further capital investments to increase capacity and self-fund long-lead items in anticipation of contract award. Our Sealy, TX operation could reach the maximum monthly Caiman output without negative impact to our FMTV production. Lastly, we stand ready to further expand monthly MRAP production by allowing other manufacturers to produce our MRAP design variants under license.

Reaching and exceeding the above production rates has not been without difficulties. It has been necessary to rapidly increase our manufacturing work forces with a special emphasis on critical skills like automotive mechanics and welders. Significant attention to staffing and training has effectively managed this risk. Our supply chains have paced the initial production ramp up and continuing supply chain risks for the RG33 and Caiman are summarized in the following paragraphs.

RG33:

While no suppliers are currently delivering behind schedule, axles have been the limiting factor with RG33 production ramp-up. We have established a second axle supplier to help alleviate this situation. The following suppliers are considered critical to the planned schedule ramp-up going forward. Numerous actions are underway to mitigate performance risk with the suppliers.

- AF Technologies, TX; Electrical harnesses
- Arvin Meritor, MI; Axles
- AxleTech, MI; Axles
- Algoma Steel, Ontario Canada; Steel Plate
- Mittal Steel, PA; Steel Plate
- Oregon Steel. OR; Steel Plate
- Sechan Electronics, PA; Electrical components

Caiman:

Currently no supplier is causing late deliveries. The following suppliers are considered critical to the planned schedule ramp-up going forward. Numerous actions are underway to mitigate performance risk with the suppliers.

- AM Tank, OH ; cut panels for armored floor, doors and sidewalls of the armored capsule. To mitigate the risk we are qualifying two more suppliers: Castle Metals OH and W. Industries MI.
- Real Time Laboratories, FL; air conditioning/filtration units
- Diamatrix, AZ; small fabricated parts

It should be noted that certain key elements such as turrets, armored glass and spall liner material are supplied from within BAE Systems and do not constrain delivery. By using the standard FMTV chassis and automotive drive train, 85% of the Caiman supply chain is available, qualified and mature.

The Department's application of the DX rating to the MRAP program and the waiver of provisions of the Buy America Act were quite helpful in meeting the urgent demand. These actions allowed us to leverage our worldwide supply chain and use our experienced operations in South Africa. We appreciate the Government's efforts.

► **Coordination Between BAE Systems and MRAP Program Office**

We would like to single out the MRAP Program Manager, Mr. Paul Mann, for his leadership and unceasing efforts to field MRAP. We have maintained an open, direct and professional relationship since the inception of MRAP. For the RG33 and Caiman vehicles, we have been in direct contact with Mr. Mann and his personnel continually at all levels within Land & Armaments. This coordination is essential and provides frequent feedback. Normal contractual practices could not possibly keep up with the fast pace of this program. Both the Program Manager and BAE Systems have had to rely on timely communication, joint problem resolution and quick implementation of fixes to meet the urgent needs. This collaboration, within the framework of the contract, deserves commendation. The selfless actions by all involved have been crucial for so much to have been accomplished in such a short time.

► **Willingness to Communicate and Interact with Other MRAP Suppliers and to Share Best Practices**

Land & Armaments is prepared to collaborate with all MRAP prime contractors to improve survivability; accelerate production and fielding; and enhance sustainment of MRAP vehicles. We have already collaborated with the other MRAP prime contractors to cross train our field service representatives on all vehicle variants to optimize in-theater support. As previously mentioned, we have already licensed General Dynamics to build the RG31. Earlier this year, our Sealy Operations assisted Force Protection in Cougar assembly. Land & Armaments has previously collaborated with Force Protection on the Iraqi Light Armored Vehicle program and are currently collaborating with

Navistar International on the upcoming Joint Light Tactical Vehicle program. We have demonstrated the ability to optimize our performance by taking the best capabilities among our companies within the Land & Armaments Operating Group and we stand ready to work with our industry colleagues to better meet the needs of our troops.

In closing and on behalf of the BAE Systems Land & Armaments team, I thank you for the invitation to come tell our MRAP story. BAE Systems has been leaning forward, often self-funding activities in advance of contract, with the sole focus of rapidly delivering the most survivable vehicles possible to the warfighter. We are proud to be a major part of the MRAP team and are well positioned to respond rapidly to future program needs.

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Statement by Gordon McGilton
Chief Executive Officer, Force Protection Industries, Inc.
House of Representatives Defense Subcommittees
November 8, 2007

Chairman Taylor, Chairman Abercrombie, members of the House Armed Services Committee: Force Protection Industries appreciates this opportunity to update you with regard to this critical program.

As of the first of November, Force Protection has delivered 1,384 Cougar and Buffalo mine protected vehicles to our warfighters. They are:

146 Buffalo route clearance vehicles
153 Cougar Iraqi Light Armored Vehicles
28 Cougar Hardened Engineer Vehicles
216 Cougar Joint EOD Rapid Response Vehicles
108 Cougar Mastiffs for the United Kingdom
734 Cougar MRAP Category I & II vehicles

In order to put the delivery of those vehicles into some perspective, I will provide a brief synopsis of our history relative to building mine protected vehicles.

Background: Force Protection's sole mission is to manufacture, deliver, and maintain vehicles that feature the best protection available to American and Coalition warfighters facing the threat of Improvised Explosive Devices. MRAP manufacturing is not an additional business line for us. It is our only job. Every action we take, including investments and partnerships, is designed to help us fulfill our mission.

Force Protection Industries was incorporated in early 2005. At that time we employed 200 people and occupied 100,000 square feet of manufacturing space in South Carolina. By the end of 2005, we had expanded to 250,000 square feet of space and 350 employees. Most importantly, we had delivered 60 vehicles. By the end of 2006 we had nearly quintupled the number of vehicles delivered to 296. In 2006, we also had expanded our manufacturing facilities to 450,000 square feet and added 400 employees for a total of 750. Today, Force Protection employs almost 1,300 workers and occupies nearly 1 million square feet of manufacturing space in 4 facilities in South Carolina and North Carolina. These manufacturing operations are supported by a significant Research and Development facility, and a 300-acre blast and ballistics testing facility.

In addition, we have formed a new company, Force Dynamics, through our joint venture with General Dynamics Land Systems. The partnership gives us access to General Dynamic's substantial manufacturing capabilities. As a result, there are now multiple facilities manufacturing Cougars. Our supply chain has been expanded and our ability to rapidly incorporate design improvements is greatly enhanced. Of particular note, we have been able to reduce the price of a Cougar by roughly $150,000 to under $490,000. Finally, we have expanded the enterprise to include additional manufacturing by using subcontracting and licensing arrangements.

Interaction with other manufacturers: Because of the potential demand for MRAP vehicles, we have focused on two program goals. The first was to establish enough manufacturing capacity within our joint venture with General Dynamics so that we could deliver roughly 500 vehicles a month. The second goal was to license production to other commercial and military industrial manufacturers to expand or contract our delivery capacity as necessary to meet demands that are likely to change periodically. Additionally, teaming allows us to spread our manufacturing capability to ensure that we are not too reliant upon any one supplier or plant.

The following is a summary to date of Force Protection's interaction with other manufacturers:

-Joint Venture with General Dynamics - increased capacity across all functional areas, including engineering, manufacturing, supply chain management, logistics planning and execution and sustainment. General Dynamics Land Systems produced more than 60 Cougar vehicles in October 2007. By February 2008, they will be manufacturing approximately 200 Cougars per month.

-Spartan Chassis - expanded a robust automotive and final assembly capability. As a consequence, our enterprise can now rely on Spartan to help us deliver several hundred Cougars per month.

-Armor Holdings (formerly Stewart and Stevenson and now BAE) – delivered 200 completed Cougars between February and July 2007. If demand continues to increase, we will look to them for additional manufacturing.

-Marine Corps Logistics Base at Albany, GA - performs Cougar capsule manufacturing. This military depot is a key part of our production team.

-BAE's Ground Systems Division - licensing our Cougar design to BAE as the prime contractor, we have jointly delivered more than 350 ILAVs to the Iraqi Army. Force Protection continues to produce and support these vehicles in conjunction with BAE.

-Red River Army Depot - ongoing discussions are aimed at the establishment of an Army MRAP maintenance and training facility. We also are exploring the use of Red River's manufacturing capacity in the development of Cougars.

-Textron- Force Protection has an existing agreement with Textron to manufacture Cougars. Although this agreement has not been executed due to lack of orders, this opportunity is still available to us. Should the demands of the program warrant it, we will quickly add Textron to our team to accelerate deliveries and expand the manufacturing base for Cougar MRAPs.

-Medical University of South Carolina (MUSC) - Force Protection plans to fund the establishment of a research center to improve the medical technology available for diagnosing and treating Traumatic Brain Injury (TBI) resulting from IED attacks. Through this agreement, MUSC will study the physics of blast events using our South Carolina test range. Force Protection hopes to learn more about the physical effects on

soldiers and apply that knowledge to vehicle designs that will decrease the likelihood of injury.

Industrial base capacity: In June 2007 representatives of the Department of the Navy asked Force Protection to determine the maximum production rates we could achieve by Dec. 31, 2008. Our exhaustive review of every production aspect, including availability and training of new employees and access to critical parts for the Cougar, led us to conclude that the Force Protection led team could produce 500 vehicles per month by April 2008 and 1,000 vehicles per month by July 2008, for a total of 12,100 MRAPs by the end of 2008. Our analysis did find two areas of concern: tapered roller bearings (which are used in the manufacture of transfer cases) and axles. The inclusion of the DX DPAS rating has eliminated the roller bearing concern, and we have identified alternative axle suppliers. Our analysis found no show stoppers that would prevent us from being able to achieve production rates of approximately 1,000 vehicles per month (including steel, armored steel, engines, transmissions, glass, tires and wheels).

Coordination with the MRAP Joint Program Office: Force Protection has enjoyed a highly professional relationship with all of our customer program offices. Throughout three-plus years of providing these vehicles, each and every one of the program offices has undertaken ways to facilitate our ability to deliver more efficiently. I would like to publicly express our appreciation to Brigadier General Brogan and Major General Catto along with Mr. Barry Dillon at Marine Corps Systems Command; Mr. Paul Mann, the current MRAP program director, and his predecessor Marine Colonel Michael Micucci, along with their staffs; Brigadier General John Bartley and his staff at the Army Tank Automotive & Armaments Command; and the Defense Contract Management Agency. The kind of growth we have been able to maintain is replete with challenges, which stem from establishing the requisite capacity, acquiring the necessary facilities, and deploying the needed processes and procedures to manufacture in a reliable, repeatable fashion. Despite these challenges, each and every one of our customer agencies has demonstrated a willingness to focus on the end result, delivery of these life saving vehicles. Today, we have an established, open line of communication with our

Marine Corps, Army, and DOD customers, and work closely with them in forecasting future demand to the maximum extent it is known.

What can the Government do to help?

-Provide more timely details about the long-term plans for the program.

-By the second half of this fiscal year, facilitate introduction of friendly foreign customers as a means of further stabilizing the program and allowing industry to achieve maximum utility for the capacity we are creating.

-Provide timely funding that would enable our team to control costs by allowing us to order supplies in bulk and with long lead times.

It has been Force Protection's distinct pleasure and privilege to be able to play a critical role in helping to ensure that Soldiers and Marines on the ground can execute their missions and come home to their loved ones. Both the Cougar and Buffalo vehicles continue to perform extremely well in our active theaters of operation, but Force Protection's most important measure of success is the lives saved because of the protection our vehicles provide. Again, I thank you, Mr. Chairman and members of the Committee, for the opportunity to provide you this update. On behalf of all of the employees of Force Protection, we look forward to continuing to be part of this important program.

DISCLOSURE FORM FOR WITNESSES
CONCERNING FEDERAL CONTRACT AND GRANT INFORMATION

INSTRUCTION TO WITNESSES: Rule 11, clause 2(g)(4), of the Rules of the U.S. House of Representatives for the 110th Congress requires nongovernmental witnesses appearing before House committees to include in their written statements a curriculum vitae and a disclosure of the amount and source of any federal contracts or grants (including subcontracts and subgrants) received during the current and two previous fiscal years either by the witness or by an entity represented by the witness. This form is intended to assist witnesses appearing before the House Armed Services Committee in complying with the House rule.

Witness name: Gordon McGilton

Capacity in which appearing: (check one)

___Individual

_X_Representative

If appearing in a representative capacity, name of the company, association or other entity being represented: Force Protection Industries, Inc.

FISCAL YEAR 2007 (10/06 – 9/07)

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
M56HZCV-07-P-0187	TACOM - WARREN (USA)	$ 8,750.00	Buffalo Coupons
M67854-07-C-5039	MARCORSYSCOM (USMC)	$ 8,530,192.00	Cougar JERRV and Buffalo Vehicles, Spare Parts and Service Support
M67854-07-C-5036	MARCORSYSCOM (USMC)	$ 293,579.00	Cougar JERRV Armor
M67854-07-D-5015	MARCORSYSCOM (USMC)	$ 9,379,370.00	Cougar JERRV Vehicles and Spare Parts
M67854-07-5031	MARCORSYSCOM (USMC)	$562,734,678.00	MRAP Vehicles (CAT 1 & 2), Spare Parts and Service Support
M67854-07-D-5006	MARCORSYSCOM (USMC)	$187,792,566.00	MRAP Vehicles (CAT 1, 2 & 3), Spare Parts and Service Support
Various	Army/USMC/DLA	$ 21,701,187.75	Spare Parts

FISCAL YEAR 2006 (10/05 – 9/06)

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
W56HZV-06-C-0245	TACOM - WARREN (USA)	$ 42,701,491.93	Buffalo Vehicles, Spare Parts and Service Support
W91GEU-06-A-0043	JCC - I/A VICTORY RCC (USMC)	$ 5,000,000.00	Cougar JERRV Spare Parts
N00178-06-C-3005	NSWCDD (USN)	$ 131,107.26	Buffalo Vehicle Modification and Spare Parts
M67854-06-D-5042	MARCORSYSCOM (USMC)	$ 55,042,043.97	Cougar JERRV Vehicles, Spare Parts and Service Support
M67854-06-D-5162	MARCORSYSCOM (USMC) -FMS	$ 71,258,176.16	Cougar MASTIFF Vehicles, Spare Parts and Service Support
W56HZV-06-P-1233	TACOM - WARREN (USA)	$ 16,264.00	Buffalo Axles
W56HZV-06-P-1409	TACOM - WARREN (USA)	$ 23,600.00	Buffalo Test Service Support
M67854-06-P-5133	MARCORSYSCOM (USMC)	$ 4,030.00	Buffalo Keyless Entry
W909MY-06-P-0003	US ARMY CE-LCMC ACQUISITION CENTER WASHINGTON (USA)	$ 77,400.00	Buffalo Spall Liner Kit Parts
M67854-06- -5171	C MARCORSYSCOM (USMC)	$ 103,511.00	Cougar JERRV Glass Parts
Various	Army/USMC/BPA	$ 2,807,924.47	Spare Parts

FISCAL YEAR 2005 (10/04 – 9/05)

Federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
M67854-05-C-5178	MARCORSYSCOM (USMC)	$ 3,852,026.00	Buffalo Vehicles, Spare Parts and Service Support
W909MY-05-C-0001	US ARMYCECOM ACQUISITION CENTER WASHINGTON (USA)	$ 10,127,415.93	Buffalo Vehicles, Spare Parts and Service Support
W9124Q-05-P-0034	ARMY CONTRACTING AGENCY	$ 80,125.82	Buffalo Parts (seats)
M67854-05-D-5091	MARCORSYSCOM (USMC)	$100,675,245.17	Cougar JERRV Vehicles, Spare Parts and Service Support

Federal Contract Information: If you or the entity you represent before the Committee on Armed Services has contracts (including subcontracts) with the federal government, please provide the following information:

Number of contracts (including subcontracts) with the federal government:

Current fiscal year (2007)	**74**
Fiscal year 2006:	**42**
Fiscal year 2005:	**16**

Federal agencies with which federal contracts are held:

Current fiscal year (2007): **Army, Marines, Defense Logistics Agency**
Fiscal year 2006: **Army, Marines, Navy**
Fiscal year 2005: **Army, Marines**

List of subjects of federal contract(s) (for example, ship construction, aircraft parts manufacturing, software design, force structure consultant, architecture & engineering services, etc.):

Current fiscal year (2007): **Manufacture and supply mine resistant, ballistic proof vehicles, spare parts and support services**.
Fiscal year 2006 **Manufacture and supply mine resistant, ballistic proof vehicles, spare parts and support services**
Fiscal year 2005 **Manufacture and supply mine resistant, ballistic proof vehicles, spare parts and support services** _.

Aggregate dollar value of federal contracts held:

Current fiscal year (2007):	**$790,440,322.75**;
Fiscal year 2006:	**$174,357,624.32**;
Fiscal year 2005:	**$114,734,812.92**.

Federal Grant Information: If you or the entity you represent before the Committee on Armed Services has grants (including sub grants) with the federal government, please provide the following information:

THIS ENTIRE SECTION IS NOT APPLICABLE

Number of grants (including sub grants) with the federal government:

Current fiscal year (2007):_____
Fiscal year 2006:_____
Fiscal year 2005:_____

Federal agencies with which federal grants are held:

Current fiscal year (2007):_____
Fiscal year 2006:_____
Fiscal year 2005:_____

List of subjects of federal grants(s) (for example, materials research, sociological study, software design, etc.):

Current fiscal year (2007):_____
Fiscal year 2006:_____
Fiscal year 2005:_____

Aggregate dollar value of federal grants held:

Current fiscal year (2007):_____
Fiscal year 2006:_____
Fiscal year 2005:_____

Gordon R. McGilton
Curriculum Vitae

1961-1964(United States Marine Corps)
I honorably served as an infantryman and fire team leader in Asia. Achieved the rank of Corporal E-4. Upon returning stateside, assigned to personnel administration duties and attended prep-school for Naval Enlisted Scientific Education Program prior to discharge.

1964-1968:
(Tool Specialty Company, a custom tool and die manufacturer)
Served an apprenticeship and became a toolmaker at one of the premier machine shops in Southern California. This program required both classroom studies at Los Angeles Trade Technical College and on the job training in a machine shop for approximately four (4) years.

1968-1978:
(Roy Steffey Enterprises, an automotive and marine equipment supplier)
We operated as a partnership that built custom chassis, and racing engines, for automobiles. In addition, this enterprise also built accessories and racing engines for boats. These endeavors also required the design of many specialized structural, mechanical, hydraulic and aerodynamic systems. The work was precise and demanding, but usually on a small scale. The products produced were restricted to low volume production. It was however very profitable.

(General Motors Gear and Axle, East Tool and Engineering, Riem Tool and Engineering)
During the day I worked as a toolmaker and in the evening I worked on an assembly line to support my young family. In an effort to create a better future, I also attended classes at the local Jr. College, in the evening, between jobs.

(TRW, Inc. Steering and Suspension Division)
I accepted a position in the product engineering drafting room of this large, multinational, engineering and manufacturing company north of Detroit, Michigan. I progressed through positions of increasing responsibility including detailer, draftsman, designer, engineering technician, test engineer, product engineer and program manager. As a result of these assignments I was presented with an opportunity to work with others to design, test and ultimately mass produce a proprietary design for the first large scale application of power rack and pinion steering in the United States. This work lead to patents being granted to me for the designs of steering control valves, and the associated manufacturing processes necessary to produce them. start-up of the manufacturing This project provided further experience in designing, testing and large scale manufacturing of safety critical products, for use by the public consumer. I was deeply involved in the start-up of this manufacturing division, located in Rogersville, Tennessee. This multi-national company considered this division to be one of the most successful in the company at the time.

1978-1982:
(Gordon McGilton and Associates, Beni and Associates, Allen Industries, Inc.)
I felt that I needed greater understanding of the sales and marketing aspects of a company so I accepted a position as an account manager for an automotive OEM supplier that produced vehicle acoustics management materials. I handled the company's largest client, General Motors.

I then accepted a position as a Manufacturer's Representative for a number of automotive suppliers including the following: ITT, SKF, Bendix, Leroy Machine, U.S. Manufacturing and Accurcast Die Casting.

I used the above listed experience and training to open a consulting practice with the original intent of ONLY doing product design work, under contract. As the business progressed it expanded from "product design only" until it included process design, process control, staff training and facility design, for clients both large and small. The firm did work for the (at the time) big three automakers, and many of the companies which were suppliers to them. Additional clients were served in each of the following industries:

Food service; water purification; electrical contractor's tools; stained glass tools; boating accessories; automotive OEM and aftermarket products.

The firm provide "turn key" services to companies from "concept innovation" through "customer approval and delivery" systems.

The firm had as clients, at the same time, some of the largest companies in the United States and one of the largest companies in India. These clients were accompanied by a multitude of other enterprises of varied size and description, but primarily those in the high volume manufacturing sector. The firm specialized in the design and "start-up and/or rescue" of manufacturing and other operations.

(Retirement :)

A failed nine month attempt at retirement caused me to look for something meaningful to do with my time.

Back to work:

1982-1084
(Kennedy Company, Inc. a magnetic media equipment design and manufacturing company)
I relocated to Southern California and took a job at a company that manufactured products for use in the data processing industry. These were highly engineered products for use by large institutions such as banks, credit card companies, and telephone companies. The company was vertically integrated and did everything in house, from the innovation of its electronic products, to marketing and sales, to engineering and test, all the way through manufacturing and installation of the products. This company had suppliers all over the world as well as customers in all of the major international markets.

I started as a Metrologist, then became a program manager for an offshore outsourcing initiative and within two years became the Vice President of Operations.

Having worked in literally every department of this company, there wasn't much else to learn there.

1984-1986:
(TRW, Inc. Vehicle Safety Components Division)

I was again hired by a previous employer to start a new division for their company to manufacture inertia switches for automotive airbags It involved reverse engineering a product, and improving the design for reliability and manufacturability. The product was a safety critical component intended to save lives and reduce the extent of injuries in the event of an automobile accident.

Once again an entire system had to be created for documenting the product, pricing it to be profitable, integrating it into the customer's vehicle and then building a manufacturing facility to reliably produce it. This computer controlled and automated clean-room facility, and all of the processes within it, were considered to be leading edge at the time, and if viewed today would still be considered the same. It was often described by the industry press, auditors and analysts as a "Model Company".

1986-2003:
(Gordon McGilton Partners and Lacrimedics Inc.a medical device innovator)
Owned and operated another small consulting company. This company provided seminars on business theory. In addition to the seminars, the company provided tools to be used to improve the performance of a company, regardless of the industry. The firm and its associates are considered "Experts" in their understanding and ability to present the teachings of Dr. W. Edwards Deming and making those teachings actionable in business.

Industries served by the firm vary from small custom manufacturing concerns and food service businesses, to large telecommunications, insurance and software enterprises. Among medium sized companies the firm served medical device manufacturers and healthcare providers of various sizes.

The firm and its associates have expertise in all aspects of a business, so there isn't a resource, necessary to help a business flourish, that the firm could not provide. Investment bankers often solicited the services of the firm during due diligence activities.

In parallel with operating the consulting firm, a leadership position was accepted with a medical device design and marketing company. The assignment was to relocate the company and expand the market for a proprietary medical test and treatment developed by the company. The company was restructured and expanded successfully. After the redesign of the company it performed extremely well, by cornering approximately 55% of the known market at the time.

(Gordon McGilton Partners, Apt Leadership, LLC a leadership training company)
This partnership provides leadership training and business consulting services.
This same firm also has available for use, and for purchase, proprietary software products which will allow companies to make their systems and processes visible to them. This capability is important to the management of the business, since it will assist them in better understanding what is producing their financial and other outcomes. This software is further enhanced with another proprietary Business Intelligence software application which is used to chart, and analyze, the data produced by the processes of the company. This software then recommends a strategy for the improvement of the performance of the processes being analyzed. No other software currently on the market offers this capability.

The firm is also often asked to evaluate an enterprise before, or during, a potential merger or acquisition, or foreclosure action by creditors, or by management teams who just can't figure out what to try next.

Clients during this period included the following:
J. D. Edwards Inc.; U.S. Navy; CIGNA Insurance Co.; Starbuck's;

2000-2004
(Apt Leadership L.L.C. and Ashford Capital a funding provider)
Concurrently participated in the operation of the training and software company while working with a small capital provider. The capital company provided services in the form of bridge loans, debt restructuring and capital raises for small and medium sized business enterprises. I actively participated in the evaluation of the opportunities presented to the capital company. Upon a decision to provide capital, the provider often engaged the firm to evaluate the lender's risks, to ensure successful performance by the borrower.

2005-present:
(Apt Leadership and Force Protection, Inc. a defense contractor)
I initially provided consulting services to Force Protection Industries in the area of quality processes and controls. I advised the Board of Directors of the need to completely restructure the design and management of the company to resolve long standing difficulties with the performance of the company.

I accepted employment as the Chief Quality Officer with Force Protection Industries. Within a few months accepted the position of Chief Executive Officer and accepted a position on the board of directors.

After careful consideration ceased all manufacturing operations of the company to take the actions necessary to properly staff, design and equip the company to become a high-volume vehicle manufacturing operation. This was essentially taking action to commence the conversation of the company from a prototype shop into a production enterprise. This enterprise has now grown to be the dominant provider of life saving blast and ballistic resistant wheeled vehicles, providing unmatched levels of protection for those in combat areas. The company now employs approximately 1,800 people throughout the United States. It operates in more than 1,000,000 square feet of manufacturing space. The design and manufacture of the vehicles is supported by both a Research and Development facility and a 300 acre blast and ballistics test range. The company also provides training in the use and repair of the company's vehicles. Approximately 200 field service representatives, employed and trained by the company, currently serve in the Middle East to assure the continued availability of the vehicles.

Statement by David Heebner
President General Dynamics Land Systems
House of Representatives Defense Subcommittees
November 8, 2007

Thank you, Chairman Taylor, Chairman Abercrombie and Ranking Members Bartlett and Saxton for allowing me an opportunity to testify at this joint session of the Seapower and Expeditionary Forces subcommittee and the Air and Land Forces subcommittee of the House Armed Services Committee. My name is David Heebner and I am the president of General Dynamics Land Systems.

It is an honor for me to represent General Dynamics Land Systems employees across the United States and Canada, and our component suppliers around the world who are building Mine Resistant Ambush Protected vehicles for American Forces.

The history of General Dynamics Land Systems (GDLS) can be traced to the fall of 1940 when the Department of Defense contracted with the Chrysler Corporation to build a plant in Warren, Michigan, capable of producing tanks for the U.S. Army. By April of 1941, in less than nine months, virgin farm land gave way to the Detroit Arsenal tank plant which mass produced the legendary Sherman tank, the life saving combat vehicle of World War II. The engineering expertise, manufacturing pride and commitment epitomized by the "Greatest Generation" is living in the employees working on the MRAP production lines today. That legacy has transferred from the production teams and supply chain managers who cut their teeth on the Abrams main battle tank, the Canadian and Marine Corps Light Armored Vehicles and the Army's Stryker wheeled

combat vehicle. Our employees are committed to winning the global war on terror, just as their parents and grandparents were in the trying days of the greatest generation.

My objective here today is to report to you that GDLS and our partners are focused on meeting or exceeding the extremely aggressive plan to deliver MRAP vehicles to our fighting forces. We have added manufacturing facilities, hired and trained employees, qualified suppliers and are helping suppliers increase their capacity. We have encountered issues common to start-up programs, but we have dealt with them and continue to ramp-up production.

We are working effectively with the Joint Program Office and consider ourselves fortunate to be part of the larger team addressing this most urgent need. We have communicated directly with Secretary Young and clearly understand his charge for us to perform. We have the full support of our corporate leadership at General Dynamics and see the same high level of commitment from our partners.

General Dynamics Land Systems is producing two different types of vehicles for the MRAP program. The improved RG-31 Mk5E, a BAE OMC South Africa vehicle, is under contract to General Dynamics Land Systems-Canada. The Cougar MRAP category I & II vehicles are built in partnership with Force Protection Industries of South Carolina.

Statement by David Heebner
President General Dynamics Land Systems
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November 8, 2007

Before initiation of the MRAP program production, we provided over 500 RG-31 vehicles for use by U.S. Army and Marine Corps Explosive Ordnance Detachments, Special Operations Forces and for Canadian Forces. These vehicles were built in BAE OMC's South Africa plant and shipped to military forces in theater where they are supported by General Dynamics Land Systems. Our world wide supplier base and the lifting of program international restrictions enabled us to ramp up production rates for the MRAP program. With the support and concurrence of BAE, we established a U.S. production site at Demmer Corporation in Michigan. The production plants in the USA and South Africa together will deliver 600 MRAP vehicles by March 2008. This is an example of cooperation between two major international defense companies, spanning two continents, to provide urgently needed capability to our forces.

GDLS began producing armored Cougar capsules for Force Protection Industries in 2006. Capsules were manufactured at our Ohio plant and were shipped to FPI in South Carolina for final assembly. This successful relationship, led to the formation of a joint venture (Force Dynamics) between GDLS and FPI to deliver Cougar MRAP category I & II vehicles. The joint venture shares the production and program management responsibilities for MRAP contracts. With FPI's full support, in less than 120 days following contract award, GDLS capitalized, installed tooling, established process documentation, hired and trained hundreds of employees, and delivered its first complete MRAP vehicle from a new production site in Alabama. In addition, we established production at Spartan Motors in Michigan which together with our Alabama site will

produce 105 vehicles this month and their combined monthly rate will be 226 by April. The Force Dynamics Joint Venture has combined the strengths and full capabilities of both companies to better manage, produce and successfully deliver MRAP Cougar vehicles.

General Dynamics Land Systems – Canada is funded to deliver 600 RG-31 vehicles and will complete deliveries by March 2008. We remain capable of fulfilling additional contracts should the program office determine there are further requirements for the RG-31. Additional deliveries can begin within six months following contract award.

General Dynamics Land Systems together with Force Protection Industries will jointly deliver more than 2,700 Cougar category I & II MRAP vehicles by the end of April 2008. We are currently 55 Cougar MRAP vehicles ahead of schedule and will continue to accelerate production. Maintaining this accelerated production performance beyond April 2008 will require timely commitment of additional funds. Funding for new orders must be in place and contracts awarded by December 1st to remain inside our key supplier's material lead times and avoid a disruption at the Alabama, Michigan, Ohio and South Carolina production plants.

As with any accelerated manufacturing program, industrial capacity and material chokepoints at the sub-tier supplier level warrant close attention. In order to continue

accelerated deliveries of Cougar MRAP vehicles, the Joint Venture has identified axles and armor steel as watch items. To ensure continuity of supply at required levels, we are arranging for alternate sources of both commodities. For vehicle axels, we are working with Arvin Meritor, American Axle & Manufacturing, Axle Tech, Dana Corporation and Magna to augment our current suppliers. Similarly, we are bringing on a second source for H-Hard steel, Algoma, to complement the existing supplier. Mittal. We constantly take the pulse of our supply chain, monitoring to ensure orders are placed inside our material lead-times.

I mentioned previously that we are delivering 600 RG-31 MRAPs from two production lines. Ramping-up of production in South Africa and establishing a new line in Michigan have not been without challenges. However, we have effectively worked through those challenges in manpower hiring and training, tooling, process control and supplier qualification. We face axle supply constraints to accelerating RG-31 deliveries, but expect to break-through this bottleneck and complete contracted deliveries in first quarter 2008.

Cooperation with the MRAP program office can be characterized as highly intense, professional and effective. While we would have preferred earlier, larger contract awards, the program office provided early insights of potential awards to enable our planning and rapidly issued contracts as soon as funds became available. Our product performance feedback from field testing and insights on emerging threats has

been shared. GDLS and our Joint Venture partners strongly compliment the program office for its responsiveness to changing conditions and for their energetic and timely resolution of issues requiring immediate attention.

Success in the defense industry today requires having the agility to both compete and partner with other original equipment manufacturers. I believe each company represented here today has learned how to do both. GDLS is proud of our relationship that exists with our partners at BAE and Force Protection Industries. Together we have shared management, process and production expertise to respond more quickly and effectively to MRAP requirements. We are willing to communicate and interact with other MRAP suppliers to share best-practices for MRAP vehicles. There are minor contract terms that would need to be worked out, but we are ready to collaborate if doing so improves the survivability or production rates of these vehicles.

In summary, permit me to assure both Chairmen and Ranking Members of the commitment to the MRAP program of General Dynamics Land Systems and its suppliers and partners around the world. We are doing everything possible to meet or exceed planned deliveries and we are willing to share best practices among MRAP suppliers to assist the joint program office continue its commendable performance. Maintaining high quality production momentum is our most critical near term objective. That requires timely receipt of new funding. By December 1st we must receive new contracts to ensure our suppliers can meet production demands and reduce risk to the delivery schedules.

Statement by David Heebner
President General Dynamics Land Systems
House of Representatives Defense Subcommittees
November 8, 2007

Thank you Chairman Taylor, Chairman Abercrombie and Ranking Members Bartlett and Saxton for your active interest and dedicated support of the MRAP program.

I look forward to your questions.

STATEMENT

MR. ARCHIE MASSICOTTE

PRESIDENT

INTERNATIONAL MILITARY

AND GOVERNMENT LLC

BEFORE THE SUBCOMMITTEES ON

SEAPOWER AND EXPEDITIONARY FORCES

AND

AIR AND LAND FORCES

OF THE HOUSE ARMED SERVICES COMMITTEE

November 8, 2007

Mr. Chairmen, Ranking Members, distinguished members of the Subcommittees, thank you for this opportunity to appear before you to discuss the Mine Resistant Ambush Protected vehicle program. My name is Archie Massicotte and I am the President of International Military and Government, LLC which is an affiliate of Navistar International Corporation. I am pleased, Mr. Chairmen, to provide the Subcommittees with information on how International Military and Government is collaborating with the Joint Program Office MRAP to bring our vast experience in manufacturing, engineering, parts and service and more to the U.S. Military.

International ® branded military vehicles served our troops in World War I, World War II, Vietnam, Korea, and the Gulf War. Today there are over 3,500 International vehicles in Iraq and Afghanistan serving in Military and Reconstruction roles in Operation Iraqi Freedom and Operation Enduring Freedom.

Our company is uniquely positioned to leverage one of the world's largest commercial truck and engine platforms for large scale production and parts support as well as fielding and logistics service worldwide.

I would offer the following facts as evidence of our Program Readiness:

► International delivered 77 MRAP vehicles in the first 100 days of our production contract.

► International's MRAP vehicles arrived in theater 136 days after receiving a production contract

► As of this date, International has been under a production contract for 160 Days and has delivered 407 MRAP vehicles.

► International has 95 MRAP's in Iraq today and 36 ready and awaiting transport at Charleston Air Force Base.

► International has mobilized to support the vehicles in theater; we have 23 Field Support Representatives on the ground and more in training; we've shipped over 58,000 parts to support the operation; and have trained operators, mechanics, and depot level maintenance units to ensure that the units have operational ready vehicles.

Navistar

Navistar International Corporation (Other OTC: NAVZ) is the parent company of International Truck and Engine Corporation, the principal operating company for all International ® brand trucks, MaxxForce brand diesel engines, IC brand school and commercial buses, and Workhorse brand chassis for motor homes and step vans. The company also provides truck and engine parts and service, and financing services.

With a broad engineering foundation to support the development of new products, International builds trucks and engines that are recognized for advanced technology, reliability, and superior performance. It is this robust engineering underpinning that allows us to rapidly adapt the MRAP to evolving threats and requirements.

There are over one and a half million International trucks on the road today serving in the most demanding roles in the most rugged industries. Every day International cement trucks, dump trucks, refuelers, water tankers, long haul carriers, and a wide variety of essential service trucks are helping to build new futures across our Nation and around the World.

In 2006 International produced and sold over 160,000 vehicles to a broad array of blue chip customers. These vehicles are built in factories in Ohio, Texas, Arkansas, Oklahoma, and Mississippi with components and subsystems that are drawn from virtually every state across America. International leads the world in the production and sale of Medium Diesel Engines. In 2006 International, through its state of the art factories in Alabama, Illinois, Indiana, and Wisconsin produced and sold over 560,000 diesel engines that power this nation's transportation sector.

To support this active fleet of trucks and engines International has developed the world's largest network of dealerships; with over 900 dealers across the United States in all 50 states supporting everyday operations and another 75 dealers around the globe carrying International products and supporting this world renowned American brand. This includes a dealership in Iraq and in Afghanistan to support the reconstruction vehicles in operation today.

International recently launched the **ProStar** a new commercial truck that has been proven in independent tests to be the most fuel efficient Class 8 truck on the road today. The ProStar is the flagship product for International and represents a Navistar culture that demands high standards, continuous improvement, and superior workmanship in every aspect of its products and performance.

International Military and Government LLC is wholly-owned subsidiary of International Truck and Engine Corporation. International military and Government leverages off the vast array of commercial capabilities and products in the parent company to bring leading-edge military vehicles to the U.S. Marine Corps, U.S. Air Force, U.S. Army, Afghan Military, Taiwanese Military, and Israeli Military. International's Family of Vehicles (FOV) all emphasize commonality and lower cost of ownership while providing unique modularity and versatility. International works closely with selected armor solution providers to design and field specific mission survivability packages. For example in 2005 and 2006 a large defense prime contractor needed armored line haul tractors to move supplies in and around Iraq. The defense prime chose International to build fully integrated armored tractors because of the uniqueness of the survivability package and International's ability to build the vehicles rapidly. International provides full lifecycle support to all of its major customers and takes particular pride in the proactive and continued involvement with customers with critical roles in OIF and OEF. This constant communication has honed our ability to adapt to changing conditions and allowed us to provide better support to units in theater.

Specific Information Request from the Subcommittee:

1. *MRAP program scope and timeliness to include analysis of adequate funding of the program*: International has been awarded five delivery orders for MRAP vehicles. The total number of vehicles ordered by DOD from International is 2,971. International will complete its last delivery of vehicles under these delivery orders by April 2008. The total value of these contracts is $1.55 Billion. The MRAP funding has been adequate. Beyond adequacy there are two aspects of funding that are important for any manufacturer. The first is to have an uninterrupted flow so as to not have to go through unnecessary shut down and startup of the manufacturing line and the second is to have as much forward visibility as possible thereby allowing International to optimize various factors for efficiency and cost control.. .

2. *Industrial base capacity, any potential material chokepoints at the sub-tier supplier level, and mechanisms being used to expand International's industrial capacity.* International produces the MRAP chassis at its Garland, Texas Assembly Plant; sources the armored capsule parts from Plasan Sasa and assembles the final product at the International Assembly Plant in West Point, MS. Through careful analysis of material and key supplier constraints International has projected that the assembly plant will be producing 500 MRAP vehicles per month by February 2008.

    - Chassis. International produces the MRAP chassis at its Garland, TX Assembly Plant. For all practical purposes there is no upper limit capacity constraint on MRAP chassis from Garland. The Garland Plant produced over 33,000 vehicles in 2006 during which time the plant was not operating at full capacity The MRAP chassis requires very little customizing and rolls off the assembly line fully prepared for armor adaptation and delivery to West Point.
    - Armor Kit. Plasan Sasa provides the armor parts for MaxxPro. Plasan Sasa is recognized as a world leader in the design of high survivability vehicle solutions. Plasan Sasa has proven its design capabilities in other critical applications to include the USMC MTVR armor solution. Plasan produces the metal composite parts on its own autoclave machine and has sub-contracted for the supply of armored plates from fully qualified suppliers
    - Armor Part Subcontractors. As International continues its steep launch ramp-up the MAXXPRO™ armor kit supply base is undergoing a careful transition from a largely Israeli network of contractors to a more concentrated U.S. supply effort. By October 2007, U.S. suppliers are producing the very complex and long-lead components for the MAXXPRO™. In addition the International-Plasan sourcing team is qualifying new U.S. based suppliers for all armor steel parts and non-ballistic parts. The key tenants of this transition are the integrity of the survivability design and security of supply. Plasan Sasa will continue to provide the metal composite kit parts. It is this transition to a U.S. Supply base which gradually lifts the capacity limits on International and allows us to get to 500 units a month in February 2008.
    - Automotive Suppliers. Through these long term relationships and in close coordination with suppliers, International projects that all of the key automotive suppliers can meet or exceed the 500 per month production target for February

2008 and beyond. International's automotive suppliers have a long history of providing high volume components to the parent company. International dedicates full time purchasing resources to ongoing relationships with key MAXXPRO suppliers to ensure that each one is aware of MAXXPRO's production plans and upcoming requirements.

- Steel. International, and Plasan, have identified and are in contract with multiple global suppliers of armored steel. These steel suppliers are well aware of the MRAP Program and have dedicated sufficient production volume to International's requirements. International and Plasan continue to use multiple sources to ensure competitive conditions and to provide alternate sources in the event of production problems at any particular plant.

3. *International analysis of coordination between the Company and the MRAP Program Office.* The Joint Program Office MRAP (JPO-MRAP) provides International with extraordinary leadership in every aspect of this unprecedented and complex procurement program. This JPO leadership is open and objective in its direction and guidance while always maintaining high standards for requirements and delivery. From a contractor perspective the truly valuable aspect of MRAP is the widespread culture of teamwork and support. Whether the government agency is the U.S. Army Test Center at Aberdeen or Space and Naval Warfare Systems Command (SPAWAR) or any of the other multitude of agencies involved in the program the widespread attitude is "How can we help you?" and "What do you need from us to help you go faster?" This MRAP lean-forward culture is contagious and has a very positive effect on International's internal readiness.

4. *International's willingness to communicate and interact with other MRAP suppliers with respect to sharing best practices for the MRAP vehicles.* International is committed to doing whatever is best for the warfighter. That is what guides us. International regularly meets and discusses business opportunities with other military and tactical wheeled vehicle suppliers and recently teamed with BAE to pursue the JLTV Program. International is collaborating with each of the MRAP manufacturers and cross-training Field Support Technicians to be able to provide universal support to any and all MRAP vehicles. This cooperative initiative is an important breakthrough and will yield

substantially more flexible field support. International is open to additional collaboration efforts that assist the program and the warfighter.

International ® MAXXPRO ™ Vehicle. The International MRAP vehicle's name is **MAXXPRO for *Maximum Protection*.** MAXXPRO is a unique and advanced MRAP

- Survivability There are numerous advanced survivability features included within the MAXXPRO™. The cumulative effect of these complementary subsystems is a highly survivable MRAP vehicle that did extremely well in blast and ballistic testing.
- Performance. The MAXXPRO™ features a proven International I-308 8.7 liter diesel engine which provides 330 HP to power the 35,000 lb vehicle The MAXXPRO™ is built on the International 7000 Series Severe Service chassis and together with its Allison Transmission and Arvin Meritor axles the MAXXPRO™ is more than capable of carrying 6 to 8 soldiers and their associated equipment and gear.
- Manufacturability. Unlike most other MRAP vehicles the MAXXPRO™ is constructed by bolting and bonding a series of overlapping plates made of a combination of materials to include High Hard Steel, Aluminum, Kevlar, and Metal Composites. Not only is this design highly survivable but it is easily assembled when compared to a welding operation. This manufacturability feature is a key characteristic in determining production capacities. This bolt and bond design also allows for easier maintenance and repair in the field.
- Viability. International has undertaken integrated growth initiatives to ensure that the MAXXPRO remains relevant for the warfighter into the future. These include a developmental program to grow the payload capability by 10,000 lbs; a re-engine initiative to put the International I-313 (400 HP) Engine in the MAXXPRO™ so as to maintain power, speed and maneuverability; and to develop standardized integration points for multiple armor packages. It is expected that these results will be available in Spring 2008.
- Soldier and Marine Viewpoints: Anecdotal evidence from soldiers and marines who have utilized the MAXXPRO™ include comments on the exceptionally spacious interior that allows for multiple configurations and full spectrum mission

flexibility, the ease of operation and relatively quiet conditions; and the 5 sizable access/ egress points which present options in emergency situations.

International MRAP Program Success Stories:

- Aberdeen Test Experience: International delivered its PVT (Prototype Test) vehicles to the Aberdeen Test Center *early* for testing. The vehicles underwent a structured series of ballistic, blast, and automotive tests. The objectivity of the tests and the openness and candor of the test community allowed International to demonstrate its responsiveness and dedication to testing. International routinely beat test expectations especially with regard to repair and return-to-service for vehicles damaged during blasts. This eagerness was in keeping with the MRAP spirit and allowed International to begin building a reputation for partnering that continues to follow the Company today.
- Production Reliability. International takes great pride in never having missed a promised delivery date for any military program. This carefully forged integrity is being tested during the MRAP launch ramp, but the Defense Contract Management Agency (DCMA) and the JPO will attest to International's commitment to deliver the promised quantities at the time promised. As International continues to smooth out its material supply flow the Company will build on its well deserved reputation for production reliability even as our production quantities grow to unprecedented levels.
- SPAWAR Collaboration. International, in cooperation with the GFE (Government Furnished Equipment) integration activity at SPAWAR, has identified a series of integration activities which are best done further upstream in the production process. Working together with SPAWAR these activities have been relocated to the International assembly plant at West Point and in doing so have expedited the end-to-end production/integration process time for each vehicle. This International-SPAWAR collaboration is an important success story and reflects the shared goal of 'getting MRAP vehicles to Warfighters as soon as possible'. All vehicles delivered last month had the SPAWAR integration work performed before it left International's West Point facility.
- Fielding and Logistics Support. International has 'leaned-forward' to ensure that the U.S. Military has the required resources to field and support the MAXXPRO™ vehicles. Preparing manuals, training programs, field support technicians,

specialty tools and equipment, and other logistical support items, International understands the importance of fleet support and operational readiness.

- Manufacturer Collaboration. International is committed to doing whatever is best for the Warfighter. International is participating in the manufacturer collaboration to cross train field support personnel on all platforms and is enthusiastically training army mechanics at Red River Army Depot.

Summary. International, along with the entire workforce of Navistar, is proud to be building vehicles that protect our Armed Forces. We regard this program as more than just a contract – it is a distinct privilege. The engineering excellence, advanced MRAP design, high capacity production, world class support structure, and financial strength combine to make International an ideal partner for the Government on this important and high priority MRAP program.

Thank you, Mr. Chairmen and members of the Subcommittee, for the opportunity to share some of my views and experiences. I would be happy to answer any questions you may have.

QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

NOVEMBER 8, 2007

QUESTIONS SUBMITTED BY MR. TAYLOR AND MR. ABERCROMBIE

Mr. TAYLOR and Mr. ABERCROMBIE. There has been a lot of debate about the ability of the industrial base to meet MRAP production requirements. Concerns include having sufficient ballistic steel, tires, axles, transmissions, and engines to name a few. What is the most likely production rate that the base can support and how confident are you that it can be achieved? How does this match up with the rate necessary to meet current requirements?

Secretary YOUNG. Reaching a production rate above 1,000 vehicles per month by the years end is a significant challenge. However, it is achievable. By engaging with prime contractors, their key suppliers, and with prospective new suppliers, we have helped industry put plans in place to grow capacity in order to achieve our aggressive MRAP delivery schedule.

Over the past nine months we have worked closely with the armor steel, tire, and other industries to develop aggressive production and delivery ramp-up rates to sustain MRAP growth. In particular, ballistic grade steel plate for the MRAP baseline vehicle has required close scrutiny. Production rates above 1,000 vehicles per month and simultaneous fielding of add-on armor kits for MRAP and other ground vehicles in our fleet will likely result in some temporary, but manageable, steel plate shortages the first quarter of 2008. However, in the broader sense, industrial capacity is sufficient to meet current requirements.

As necessary, we will use the Department's Priority Allocation of Industrial Resources Task Force to evaluate and manage shortages of steel and any other MRAP commodities. With the assistance of the Department of Commerce, we will use the Defense Priorities and Allocations System to execute the decisions of the Task Force by managing the distribution of steel and other critical components and materials to ensure our highest priority needs continue to be met.

Mr. TAYLOR and Mr. ABERCROMBIE. To what extent did DOD's assessment of the industrial base include vendors for the various items of mission equipment? What are the potential challenges in producing this equipment?

Secretary YOUNG. The MRAP Joint Program Office monitors mission equipment requirements and vendor delivery status with the help of the mission equipment buying activities and the Space and Naval Warfare Systems Center at Charleston. The MRAP industrial capability assessment performed by the Defense Contract Management Agency did not include mission equipment except for the ballistic steel used in the fabrication of gun shields. There are no known challenges at this time with receiving timely delivery of mission equipment except for ballistic steel which has been mitigated through other proactive measures.

Mr. TAYLOR and Mr. ABERCROMBIE. An adequate supply of ballistic grade steel appears to be a major concern. Is there sufficient global capacity to meet the needs of the baseline MRAP vehicle in the context of DOD's other demands for the same kind of steel? What about meeting the demand if a more robust design dictates the need for more steel?

Secretary YOUNG. There is enough global production capacity of ballistic steel to meet MRAP program needs. This is because when a delivery conflict for ballistic steel occurs, an MRAP order automatically gets filled first. The joint MRAP and similar Army Route Clearance vehicles are the only ground vehicle programs currently authorized to use the Defense Priorities Allocations System (DPAS) "DX" priority rating on their contracts and purchase orders. This highest priority designation means that MRAP and MRAP-like orders for ballistic steel receive preferential treatment over all other DPAS lower rated "DO" and unrated orders.

Over the next few months, ballistic steel mills may not be able to accept or meet delivery need dates for some new DO rated and unrated ballistic steel orders. This is because the combined demands of MRAP production, MRAP armor kit development, and all other DoD requirements are expected to temporarily exceed available steel mill capacity. However, when an unacceptable delivery delay occurs, a program may request DPAS Special Priorities Assistance and adjustments are made to delivery schedules to best meet operational needs.

To minimize delivery disruptions on DO rated orders that compete with MRAP for ballistic steel, a DPAS Priorities and Allocations of Industrial Resources

taskforce has been monitoring and maintaining a Department-wide forecast of thin gauge steel armor plate requirements and an inventory of available steel mill production capacity. Working closely with the Services and the ballistic steel producing mills has enabled the task force to gradually expand production capacity and balance the timing and placement of orders.

Mr. TAYLOR and Mr. ABERCROMBIE. Ramping up to meet requirements will include hiring additional workers and some will need specialized skills and certifications, such as in welding. How many more workers will be needed in the coming months to support production rates and how will they be trained to ensure they have the necessary skills?

Secretary YOUNG. Current production rates show that the manufacturers' production ramps are not being affected by lack of labor, hiring or training of personnel. Individual manufacturers can provide their further assessment if desired.

Mr. TAYLOR and Mr. ABERCROMBIE. MRAP vehicles have been undergoing developmental testing since early this year and operational testing is scheduled to start soon. DOD has on order about 8,000 vehicles and the JROC has approved up to 15,000. The Director, Operational Test and Evaluation has expressed some concerns about certain aspects of testing, including the low number of armor "coupon" samples and the low number of miles for the automotive tests. How are you addressing these concerns? Has the department granted any waivers?

Secretary YOUNG. In March 2007, the Director, Operational Test and Evaluation (DOT&E) recommended that the MRAP Program add additional test vehicles to get more automotive miles and survivability testing. The Program Office accepted these recommendations and modified the testing approach. DOT&E concerns have been addressed. DOT&E approved the MRAP Test and Evaluation Master Plan, the MRAP Live Fire Strategy, and the MRAP Initial Operational Test and Evaluation (IOT&E) Test Plan in September 2007. No Live Fire or Operational Testing waivers have been requested or granted.

The Joint Program Office (JPO) and the DOT&E organization have established a Joint testing Integrated Product Team (IPT) to determine the path forward for all testing of MRAP vehicles and to develop test plans.

Mr. TAYLOR and Mr. ABERCROMBIE. What human factors issues have been raised by developmental testing, such as limits on the size of the crew or passengers or their ability to get in and out of the vehicles safely?

Secretary YOUNG. Some non-mission critical human factors were identified during testing and accepted temporarily in order to rapidly field MRAP vehicles. We are pursuing Engineering Change Proposals to correct deficiencies and improve performance. In the interim, these issues have been mitigated by placing appropriate limitations on vehicle operations.

The JPO recently stood up the Human Systems Integration—Integrated Product Team (HIS–IPT) which had its first meeting on 13 Dec 07. The HIS–IPT will be the focal point for addressing all human factors issues—those raised during developmental testing and any issues encountered in the field and will work with the manufacturers to implement the changes necessary to incorporate human factors improvements.

Mr. TAYLOR and Mr. ABERCROMBIE. What is the status of the material safety release for the variants currently on order? What human factors issues have been raised for vehicles already in the field?

Secretary YOUNG. Every fielded MRAP vehicle has completed the "Urgent" safety release process and continues through our safety program in order to complete the full safety release process.

In order for the Department to urgently obtain MRAP vehicles as fast as we have, we accepted commercially designed, and commercially manufactured vehicles. These vehicles vary and all have some human factors issues. Issues that have been identified are: door handles facing the wrong way, fire extinguishers placed in odd places or not covered adequately, and lack of internal storage spaces or tie down points.

The Joint Program Office (JPO) recently stood up the Human Systems Integration-Integrated Product Team (HSI–IPT) which had its first meeting on 13 Dec 07. The HSI–IPT will be the focal point for addressing all human factors issues and will work with the manufacturers to implement the changes necessary to incorporate human factors improvements.

Mr. TAYLOR and Mr. ABERCROMBIE. Orders for these vehicles were placed without being fully informed of the vehicles capabilities and limitations. What risks are you assuming if these vehicles are fielded without this knowledge?

Secretary YOUNG. Risks associated with our aggressive fielding schedule are mitigated by a phased testing plan and the use of temporary, non-mission critical operational limitations. To mitigate these risks, safety directives are prepared and pro-

mulgated to the Joint Forces that prescribe operating limits until correction via vehicle modifications are complete.

Early testing, which informed initial production orders, ensured that vehicles were survivable, and that no major limitations relative to mission requirements were present. The current phase of testing fully characterizes vehicle capabilities and limitations. Issues identified by the follow-on operational tests would be addressed through retrofit of engineering change proposals (ECPs) on fielded vehicles and with cut-in of the ECPs to production lines as they are identified.

Capabilities and Limitations (C&L) reports are being written and updated as we continue through the test phases. We do not view the C&L Report as a one time event, but consider it a living document populated with the latest information to inform Commanders (owners) of the MRAP vehicles once fielded.

Mr. TAYLOR and Mr. ABERCROMBIE. Even as MRAP production began, DOD acknowledged that the threat was changing and is now developing a solution for that threat. How will this impact the current test schedule and resources?

Secretary YOUNG. Completion of testing for initial MRAP vehicle designs is, and has remained, our priority. The original MRAP designs are completing the developmental testing phase of the testing regimen and migrating to operational test. These tests require different assets and resources.

Testing for additional survivability solutions to meet the changing threat have been, and continue to be, worked into the testing schedule. While this has been difficult, and not without challenges, the personnel at Aberdeen Test Center have conducted all testing within the timelines required to provide decision makers with the data to make appropriate decisions.

While this effort has required long hours, hiring of additional personnel, and some prioritization of efforts, the schedule and resource impact has been managed to ensure rapid fielding of survivable vehicles to theater.

Mr. TAYLOR and Mr. ABERCROMBIE. MRAP vehicles come from the manufacturers without any mission equipment. That is being integrated under contract at the Naval Space and Warfare Center. The equipment is being bought under other contracts and then shipped to the center for installation. From there, vehicles are shipped to theater by air for fielding. However, DOD is considering an option for contractors to install the mission equipment at their own facilities. How many vehicles can be equipped with the mission equipment that is already on hand at the integration facility? How much more equipment is needed to outfit the vehicles on order and is that equipment on order? How confident are you that the vendors that produce the mission equipment can meet the demand?

Secretary YOUNG. In cooperation with mission equipment system managers, the MRAP vehicle Joint Program Office (JPO) developed a detailed plan that supports the current integration schedule. Equipment on hand plus equipment that has been reserved from on-going production lines is sufficient to support mission equipment integration for MRAP vehicles per the current delivery schedule. Because of the pace and flow of individual pieces of equipment, it is better to discuss the availability of critical pieces of equipment to meet integration schedules. The JPO attempts to maintain at least a 30-day supply of critical equipment. While we watch this closely, we have not seen any issues suggesting contractors will be unable to meet the required flow.

Mr. TAYLOR and Mr. ABERCROMBIE. How long is it taking to equip vehicles with the mission equipment once they arrive at the center? How much of that time is "non-value added", or time that a vehicle is just sitting around waiting for parts or repair or a place in the queue? To what extent is once-a-month delivery of vehicles contributing to non-value added time and how can this be mitigated?

Secretary YOUNG. I would like to take a broad view to this question. The time it takes to integrate a vehicle at SPAWAR varies from variant to variant, but since the hearing, we have data from late November to mid December which provides a sense of where we are with respect to integration time. Many of the MRAP variants are now taking only one to two days to fully equip a vehicle once integration begins. SPAWAR integration is pacing manufacturer deliveries.

The JPO continues to work with the vendors to deliver a smooth delivery of vehicles. Additionally, the vehicle processing throughput at SPAWAR has expanded to between 40-50 vehicles a day. This production rate is sufficient to maximize airlift and provide MRAPs for sealift.

Mr. TAYLOR and Mr. ABERCROMBIE. What is the status of your effort to prototype installation of mission equipment on each version of the vehicle DOD is buying and fielding?

Secretary YOUNG. Prototyping is complete on all vehicles except for General Dynamics Land Systems—Canada's (GDLS–C) RG–31s.

Mr. TAYLOR and Mr. ABERCROMBIE. What are the advantages and disadvantages of installing mission equipment at other locations, such as the prime contractors—facilities?

Secretary YOUNG. All mission equipment (also referred to as C4I equipment or Government Furnished Equipment—GFE) is currently installed at SPAWAR, Charleston, SC.

Potential Advantages to Integration Performed by Manufacturers:

- DOD receives fully integrated vehicles direct from manufacturer
- No one choke point for GFE installation
- May experience some cost savings due to competition between GFE installing entities
- May cut down on total enterprise integration over time as manufacturers go through learning curve

Disadvantages:

- Tracking and accounting for GFE in numerous locations is complicated and reduces flexibility in creating GFE kits. Manufacturers are armored truck builders not GFE installers.
- Manufacturers would need to ramp up capabilities, personnel, space, integration process, etc. The program would be managing numerous learning curves rather than maximizing process and progress made at SPAWAR.
- New secure space for GFE would need to be located, established and managed at multiple locations across the country.
- All transportation times, inspections, and other steps are still required (time to get vehicles to theater is still the same).
- Having to gather and input transportation management data gets more difficult due to multiple sources of the data vice one—SPAWAR.
- SPAWAR represents a unique, tested capability for C4I installation and has ramped up a skilled workforce to meet MRAP program needs. Establishing integration sites at multiple additional locations would require a similar investment of time, facilities and personnel.

Mr. TAYLOR and Mr. ABERCROMBIE. If SPAWAR were to reach capacity or if facility had to shut down or was unable to operate for more than a few days, where else could integration of the OFE take place and what would be the challenges?

Secretary YOUNG. The Joint Program Office (JPO) and SPAWAR established a Continuity of Operations (COOP) site for this exact purpose. The COOP facility is set up to serve as a complete SPAWAR Charleston replacement of all 25 lines within 72 hours. Several sites were examined, and the Orangeburg, SC location was chosen due to its large square footage and immediate availability for occupancy.

Mr. TAYLOR and Mr. ABERCROMBIE. What can the committee do to help all stakeholders meet this urgent need?

Secretary YOUNG. The strong support and commitment of the Committee and the Congress has been the key to our success in producing and fielding these life-saving vehicles at a rate that will result in more than 1,500 MRAPs in theater by the end of this calendar year. Your support of budget requests, reprogramming actions and an unprecedented allocation of funds in the Continuing Resolution has allowed us to "lean forward" in a program that is essential to our brave men and women in harms way. The Department asks for continued support for this program to the same degree that has been demonstrated thus far. On behalf of the men and women protected by these vehicles, we thank you.

Mr. TAYLOR and Mr. ABERCROMBIE. Are there any plans to offer an MRAP configured cargo/logistics variant to Army and Marine Corps forces in the immediate future?

Secretary YOUNG. No, there has been no requirement from the operating forces to configure MRAP vehicles into a cargo variant. MRAP vehicles could be made capable of carrying cargo instead of personnel at the discretion of commanders.

Mr. TAYLOR and Mr. ABERCROMBIE. What is the near term acquisition strategy for the MRAP II program, e.g. when do you plan to stop ordering MRAP I vehicles and begin ordering MRAP II vehicles? Is the industrial base primed to support large contract orders for the MRAP II vehicle?

Secretary YOUNG. The acquisition strategy for MRAPs (both MRAP I and MRAP II) is continually being shaped by the operational requirements from theater. The significance of MRAP II is that this vehicle provides options for the commanders in terms of protection and mobility. We are progressing with MRAP II testing as the theater is undertaking requirement reviews.

Mr. TAYLOR and Mr. ABERCROMBIE. How are you capturing the lessons teamed from the performance of MRAP vehicles in theater and how are you applying those lessons in terms of survivability to the existing fleet of tactical wheeled vehicles?

Secretary YOUNG. The Army and Marine Corps have "Centers for Lessons Learned" that assess forward area operations and report trends, findings and issues to combat developers and program managers. The MRAP Joint Project Office also has a "forward presence" to evaluate MRAP performance in the theater and note any shortcomings.

In addition, The National Ground Intelligence Center produced an extensive predictive threat analysis of likely adversary actions during the next 12-48 months. The classified report of the analysis was distributed to combatant commanders, senior decision makers and program managers within the Department and was used to energize Science and Technology; Research, Development and Testing communities; and industry to proactively develop and produce counter-measures to mitigate emergent threat weapons and tactics. Examples of these proactive efforts include incremental development of armor protection and electronic warfare capability.

Mr. TAYLOR and Mr. ABERCROMBIE. Have you engaged with industry about the sharing of technical designs in order to produce the most effective and complete MRAP vehicle?

Secretary YOUNG. There are several methods by which the Government may encourage "best of breed" data a sharing between MRAP contractors. These include encouraging MRAP contractors to enter into cross licensing technical data sharing agreements; and structuring future MRAP contract competitions to allow Government evaluation of MRAP technical data lifecycle costs as part of the contract source selection evaluation process.

To facilitate sharing of best practices among MRAP vehicle manufacturers, the Joint Program Office (JPO) recently held a unique performance review session consisting of two days of discussions on test results and technical data. The first day consisted of one-on-one reviews with each manufacturer of test results, successes or challenges. This was followed by development of a briefing package for the manufacturer to share with the other MRAP vehicle manufacturers. During the second day, we briefed these packages to all manufacturers and discussed issues and possible solutions. The interchange was open and honest, and included feedback from the government engineering and test teams. It led to improved insights on vehicle performance and design, and identified potential solutions. Issues discussed included vehicle floor and seat designs, and potential solutions to improve recovery capability. We encouraged the manufacturers to work together to share solutions and intend to continue regular performance and design exchange meetings.

Mr. TAYLOR and Mr. ABERCROMBIE. How are you incentivizing industry to accelerate production and facilitate their production and manufacturing processes?

Secretary YOUNG. Companies that demonstrate readiness to produce vehicles that meet MRAP requirements receive significant production orders. This incentive has been effective for a highly competitive industry. After delivery orders are issued, the Navy and DCMA work closely with contractors to monitor production progress to ensure that promised performance is delivered.

We've also worked directly with MRAP suppliers to help them accelerate production. For example, the Department authorized a DX industrial priority rating for the MRAP program to assure priority access to available material. Additionally, to increase the availability of armor steel plate and thin gauge, quenched and tempered steel from about 8,400 tons per month to about 21,000 tons per month, the Department made slight specification changes to increase throughput and encouraged steel producers to make modest capital investments. In the cases where domestic source restrictions limited access to the steel we need, the Department used the available waiver processes to tap otherwise non-compliant domestic sources as well as reliable non-domestic sources. We've also worked directly with industry to increase tire capacity from about 1,000 tires per month to about 17,000 tires per month by adding Goodyear as a second source and supporting the addition of more tire molds at both Michelin and Goodyear.

Mr. TAYLOR and Mr. ABERCROMBIE. How is the theater receiving, processing, and distributing MRAPs?

Secretary YOUNG. Once MRAP vehicles receive Government Furnished Equipment (GFE) integration at SPAWAR, SC, they are prepared for shipping into the U.S. Central Command (USCENTCOM) Area of Operations. Up to 360 vehicles per month will be shipped via strategic airlift from the United States to destinations in Iraq. The destination depends on the fielding location. Three major hubs employ strategic airlift (Forward Operating Base (FOB) Balad, FOB Liberty, and Al Asad). MRAP vehicle shipments, beyond the 360 designated by strategic airlift, depart via

seagoing vessels to Kuwait. Once in Kuwait, the vehicles are de-processed and loaded into intra-theater aircraft and sent into Iraq.

The Joint Program Office (JPO) MRAP develops the fielding schedule in coordination with USCENTCOM priorities and objectives and JPO MRAP production capabilities. MRAP vehicles are distributed in line with the fielding schedule at the direction of USCENTCOM's priorities.

Mr. TAYLOR and Mr. ABERCROMBIE. Does the theater possess adequate capacity to process the influx of MRAPs that will surely result from the dramatic increase in production from now through February.

Secretary YOUNG. Central Command developed and implemented a fielding process with the capacity to support the fielding of MRAP vehicles at a flow-rate based on the current production schedule. This effort has been accomplished in coordination with the MRAP Joint Program Office (JPO), and US Transportation Command. Theater validated the fielding process through the conduct of two Rehearsal of Concept (ROC) drills and shipment of 48 vehicles by surface in early Nov 07.

The MRAP JPO, serving as the Department of Defense lead agency, will ship MRAP vehicles from the Space and Naval Warfare Systems (SPAWAR) Center in Charleston, SC via strategic air and sealift directly to Theater. There will be a total of nine fielding sites. The first four fielding sites also serve as Regional Support Activities sites where all limited Depot level maintenance and repairs will be conducted in Theater. The strategic air shipment delivers MRAP vehicles directly to Air Port of Debarkation (APODs) in the vicinity of each MRAP fielding site. MRAPs delivered via sealift to the Surface Port of Debarkation (SPOD) in Kuwait will be transported to a local facility for deprocessing and staging for onward intra-theater movement to the fielding sites in Iraq. Intra-theater transport from Kuwait to fielding sites will be primarily completed via contract air. Surge vehicles will be moved via ground Common User Land Transportation (CULT) assets. The Marine Corps and Navy have been fielding vehicles in Iraq since Mar 07 and plan to continue under their current concept of operations. Upon arrival at the appropriate fielding site, and completion of vehicle deprocessing, USMC and USN vehicles are delivered to the user. The Army and Air Force conduct delivery of vehicles to the user in a more centralized manner at each of the fielding sites. As each Company arrives at one of the fielding sites, they begin the five day process of equipment turnover and user and maintenance training before returning to their bases with the MRAP vehicles as a unit.

Mr. TAYLOR and Mr. ABERCROMBIE. What are the positives and negatives to moving from monthly production contracts to weekly production contracts? What about daily?

Secretary YOUNG. The intent of moving from monthly to weekly production contracts is to provide an even flow of vehicle deliveries from the manufacturer to SPAWAR and allow for a smooth throughput throughout the vehicle pipeline from production to end user.

Benefits of Weekly Production Deliveries:

- Causes manufacturers to stabilize their production processes.
- Provides SPAWAR with a steady stream of vehicles.
- Reduces wait time for integration at SPAWAR.
- Expedites DCMA inspection and acceptance.
- Provides smooth, predictable flow of vehicles throughout the pipeline from production, through integration, to transportation and deprocessing and into the hands of the end user.

Potential Challenges to Contracted Weekly Production Deliveries:

- Manufacturers were pursuing steep production ramps to meet aggressive monthly delivery schedules and may experience challenges in shifting—production processes, timing, supplier orders, supplier deliveries, etc.—to meet equally aggressive weekly schedules.
- Manufacturers may experience initial delays in meeting weekly targets during the transition; the risk increases if we require a contract that binds them to new or changed requirements.
- Increases management and transaction demand on the Joint MRAP Program contracting team.

Daily:

- Contracted daily delivery schedules would not provide benefit to the Department or the program schedule to counter the increased cost in managing such deliveries.

- Manufacturers are shipping vehicles on a regular basis and deliveries to SPAWAR are leveling throughout the month.
- Daily delivery schedules would be difficult to negotiate with the individual manufacturers and would put an undue burden on both the manufacturers and the government contracting personnel required to manage daily delivery schedules.
- Manufacturers are still transitioning to a weekly schedule, as described above, and realigning their processes, supply chains, orders, deliveries, etc. would take an additional amount of time and would not impact the system until several months from now if at all.

Mr. TAYLOR and Mr. ABERCROMBIE. Do you expect MRAP vehicle requirements to increase in the preceding months?

Secretary YOUNG. Assessment by the military services of future vehicle requirements is in progress. Tie final MRAP requirement will be shaped by continual theater commander's evaluation of the vehicles capability, the threat and the strategic landscape.

The Marines have been operating their vehicles in Anbar province for several months and have made assessments based on the operational performance as well as tactics used and will brief their proposed requirements change to the Joint Requirements Oversight Council (JROC) in the near future.

The Army will perform an operational assessment of the vehicles in February 2008 after all variants have been fielded. Any change in the Army's vehicle requirement from their current interim requirement of 10,000 vehicles will be predicated on the results of the operational assessment, evolving force structure, and vehicle tactics, techniques and procedures used in Theater.

Mr. TAYLOR and Mr. ABERCROMBIE. Producing enough vehicles to meet DOD requirements will necessitate a steep ramp up of production between now and February next year. How confidant are you that you can achieve the ramp up necessary? Are your sub-tier contractors on board, especially considering you have some in common with one another?

Ms. HUDSON. From the perspective of Caiman we are already at the contract-required rate of production for the most recent award. We have a high level of confidence that we'll continue to deliver on schedule. Regarding our sub-tier contractors, XPA armor is inhouse and the government has funded the setting up of extra lines for XPA production.

From the perspective of RG33, the rate of production has been negatively impacted due to the scope of customer changes, to the SOCOM vehicle variant.

Mr. TAYLOR and Mr. ABERCROMBIE. Ramping up to meet requirements will include hiring additional workers and some will need specialized skills and certifications, such as welding. How many more workers will be needed in the coming months to support production rates and how will they be trained to ensure they have the necessary skills?

Ms. HUDSON. We are fully staffed and fully trained to deliver the required numbers.

Mr. TAYLOR and Mr. ABERCROMBIE. What are the advantages and disadvantages of installing mission equipment at other locations, such as the prime contractors' facilities?

Ms. HUDSON. We have already worked with the Joint Program Office (JPO) and SPAWAR to cut into production most of the required changes. The integration of Government Furnished Equipment is still being done at SPAWAR and SPAWAR have no difficulty in coping with that task.

Mr. TAYLOR and Mr. ABERCROMBIE. Have you been by the MRAP Task Force or MRAP program management office regarding the sharing of technical designs in order to produce the most effective and complete MRAP vehicle? Would you be willing to share this type of information with your fellow prime contractors?

Ms. HUDSON. Yes, we have had two sessions with the JPO. The first involved the sharing of data and the second was specifically aimed at increased levels of protection. As for sharing this information with our fellow contractors, we are willing and have already done so during the JPO session.

Mr. TAYLOR and Mr. ABERCROMBIE. How are you incentivizing industry to accelerate production and facilitate their production and manufacturing processes?

Ms. HUDSON. The supply base is set up to sufficiently supply the required volumes and do not need further incentivizing.

Mr. TAYLOR and Mr. ABERCROMBIE. How do you feel about moving from monthly production contracts to weekly production contracts? What about daily?

Ms. HUDSON. The Caiman vehicle has been on a weekly production schedule since September 2007. We have provided a weekly production schedule for the new con-

tract award and are contracted to it. We do not feel that anything can be more significantly achieved going to a daily production schedule, considering the transportation requirements associated with the delivery of each vehicle to SPAWAR.

Mr. TAYLOR and Mr. ABERCROMBIE. Producing enough vehicles to meet DOD requirements will necessitate a steep ramp up of production between now and February next year. How confident are you that you can achieve the ramp up necessary? Are your sub-tier contractors on board, especially considering you have some in common with one another?

Mr. MCGILTON. We were supremely confident in our ability to achieve the ramp and had all mechanisms in place to ramp up to a delivery schedule of 500 vehicles per month. All of our sub-tier contractors and suppliers were fully prepared to execute this ramp. The actions we took, at the urging of both the Under Secretary of Defense and the U.S. Congress, led us to create a network of manufacturing capacity that is today the only organization reliably producing ahead of schedule. We have been led to believe that the Department is no longer planning to have us continue our ramp. We are consequently initiating planning and actions to reduce the network and scale back our manufacturing capacity to achieve rates of roughly half, or less, of our original estimates. The information that we have access to, appears to indicate that there is no further level of demand that will sustain the need for our production capacity. This seems, from our perspective, inconsistent with the message we have repeatedly been given relative to the MRAP program; specifically at a time when we are the only OEM reliably producing ahead of schedule for what has been described as a "rescue mission," it defies our understanding as to why we would now be asked to halt our efforts and eliminate precious manufacturing capacity.

Mr. TAYLOR and Mr. ABERCROMBIE. Ramping up to meet requirements will include hiring additional workers and some will need specialized skills and certifications, such as in welding. How many more workers will be needed in the coming months to support production rates and how will they be trained to ensure they have the necessary skills?

Mr. MCGILTON. We had plans in place to continue the steady increase in manpower across all functional skills (welders/fitters, mechanics, integrators/assemblers, engineers) at each of our network and subcontractor locations. Based on the Department's current direction, we have halted all hiring and are planning to initiate workforce reductions across the next 90-120 days in order to scale back the workforce to the size needed to meet the diminished demand placed against our vehicles.

Mr. TAYLOR and Mr. ABERCROMBIE. What are the advantages and disadvantages of installing mission equipment at other locations, such as the prime contractor's facilities?

Mr. MCGILTON. The advantages are reducing the delays in fielding the vehicles and offering the potential for elimination of a single point of failure by introducing multiple sites for installation of government furnished equipment (GFE). Disadvantages include multiple ship to locations of materials and causing the potential complexity from having to provide GFE to multiple locations (vice a single location as it is currently executed) and potentially introducing multiple points for failure.

Mr. TAYLOR and Mr. ABERCROMBIE. Have you been contacted by the MRAP Task Force or MRAP program management office regarding the sharing of technical designs in order to produce the most effective and complete MRAP vehicle? Would you be willing to share this type of information with your fellow prime contractors?

Mr. MCGILTON. Yes, before and since our appearance at the HASC, we have been in contact with the MRAP Joint Program Office and participated in a joint OEM review of test data. As we said during our appearance, we are fully committed to any and all actions that will lead to the improvement of MRAP vehicles across all OEMs. As a result of this review, we have, however, uncovered what appears to be potential inconsistencies in the application and gathering of the test data and are responding through the MRAP program office with the aim of ensuring decisions made are a result of accurate and consistent evaluation. Without the urging of your committee to see that the test data was shared, we feel strongly that we would not have become aware of these issues. The HASC deserves credit for the oversight it exhibited on this specific issue.

Mr. TAYLOR and Mr. ABERCROMBIE. How are you incentivizing industry to accelerate production and facilitate their production and manufacturing processes?

Mr. MCGILTON. Mr. Chairman, as I stated in my previous testimony, and I can only speak for Force Protection, Inc., "no incentives were necessary, nor would they have helped us do a better job than we did". We viewed it as our job, our only job, to do everything we could to get these vehicles into the hands of the troops! The only additional assistance necessary from the DOD was having a firm understanding of the long term plan for this critical program, so we could invest in material

and other resources to meet the need. As my peers and I said repeatedly, small incremental orders would be the worst possible scenario for ALL contractors. It now appears that the pleas for "visibility" and "larger orders" fell on deaf ears, at least as it relates to Force Protection. To date, we still do not have visibility or substantial orders for our vehicles. What we do have, is what was requested, the capacity to deliver hundreds of vehicles each month. Our repeated monthly performance of shipping ahead of schedule is the objective evidence of that capacity. Our expectation, and what we were repeatedly told, was that "business would be awarded to those that performed". The majority of the business has now been awarded to those that we outperformed, and continue to outperform.

Sir all of these issues may NOT be of concern to you, but some of them certainly should be. I trust the wisdom of the committee to decide which is which.

Mr. TAYLOR and Mr. ABERCROMBIE. How do you feel about moving from monthly production contracts to weekly production contracts? What about daily?

Mr. MCGILTON. We are already entering into weekly production contract schedules with the MRAP program office but with the reduction of orders we are experiencing it hardly seems to matter now.

Mr. TAYLOR and Mr. ABERCROMBIE. Producing enough vehicles to meet DOD requirements will necessitate a steep ramp up of production between now and February next year. How confident are you that you can achieve the ramp up necessary? Are your sub-tier contractors on board, especially considering you have some in common with one another?

Mr. HEEBNER. We have positioned ourselves to meet the ramp-up goals at our manufacturing sites and within our supply base. This effort is apparent in our current production, where we are ahead of schedule on the production of Cougars by about 56 vehicles. Startup of North American production of the RG31 is proceeding with expected completion of contract deliveries in March 2008. In addition, we have identified external vendors for items that would typically be handled internally, providing us with the necessary flexibility to support both MRAP vehicle demands.

We are confident the General Dynamics Land Systems (GDLS) and GDLS-Canada enterprise can successfully attain previously stated surge rates. We've already increased monthly production rates for Cougar. The RG-31 North American and South African suppliers are well established and producing products to support vehicle production in two locations.

Major Cougar assembly elements (such as capsule fabrication, auto integration and final assembly) are mature and stable, inclusive of the workforce and facilities. RG–31 production is on the same path.

Mr. TAYLOR and Mr. ABERCROMBIE. Ramping up to meet requirements will include hiring additional workers and some will need specialized skills and certifications, such as in welding. How many more workers will be needed in the coming months to support production rates and how will they be trained to ensure they have the necessary skills?

Mr. HEEBNER. We have been able to hire the additional manpower required and we have developed internal training programs for required specialty skills such as welding to support both our internal and external manufacturing needs.

Mr. TAYLOR and Mr. ABERCROMBIE. What are the advantages and disadvantages of installing mission equipment at other locations, such as the prime contractors' facilities?

Mr. HEEBNER. There are essentially four advantages to installing mission-equipment packages at prime contractor/original equipment manufacturer facilities: experience, reach-back, facilities and accountability.

Experience comes in two forms. The first is experience as the manufacturer of the vehicle. An OEM's thorough knowledge of the vehicle's manufacturing process flow, assembly operations sheets and skills required in production allow them to integrate mission equipment packages in the most efficient and economical manner. The second and equally important aspect is experience as a systems integrator. OEMs have years of experience integrating complex subsystems and components into vehicles. OEMs understand their systems' performance better and have a better ability to model, analyze and assess system level-impacts of integration strategies in order to ensure the most effective integration scheme for a given mission equipment package or a combination of them. OEMs completely understand how mission-equiprnent packages impact a vehicle's weight, space and power capacities and the subsequent impact they have on system-level performance in mobility, survivability, lethality and supportability.

The second advantage that integration of mission-equipment packages at OEM facilities provides is reach-back to the point of installation on the vehicle assembly line. Should problems arise during integration, OEM have on-site systems engineers, design and manufacturing engineering expertise, plant equipment and proc-

ess and quality experts, logisticians and a responsive supply chain all with experience focused on the vehicle and similar vehicles/products. They combine with a dedicated program manager to form a team that can easily and quickly meet in the manufacturing facility if necessary, analyze problems and develop solutions. Such a rapid response minimizes the impact to production flow, system-level performance and cost. This team's experience makes them better prepared to react and adapt to unknowns because of their experience and broad perspective on the system.

An additional advantage to the integration of mission-equipment packages at OEM locations are the facilities. OEMs production facilities are geared toward providing integrated products. The facilities are flexible, expandable and in most cases already equipped for the work. That allows us to streamline the production process and adapt to change quickly. The production facilities are already structured for an efficient vehicle flow and incorporating mission-equipment package integration into that flow would also be done with efficiency in mind. Plants also have the capability to fully check integrated system performance through their quality system before handing off to the government.

Finally, having the OEM serve as mission equipment package integrator establishes a single point of ownership and accountability for the vehicle before it is handed off to soldiers and marines. The OEM has responsibility for the entire vehicle and its performance. As a result, the company must coordinate with its vendor network and the mission equipment package provider to ensure the system meets government needs. The use of a third party integrator complicates the process and increases the likelihood for errors and slower response times.

Mr. TAYLOR and Mr. ABERCROMBIE. Have you been [approached] by the MRAP Task Force or MRAP program management office regarding the sharing of technical designs in order to produce the most effective and complete MRAP vehicle? Would you be willing to share this type of information with your fellow prime contractors?

Mr. HEEBNER. General Dynamics Land Systems remains open to sharing technology across the MRAP fleet given that the proper contractual terms and conditions exist, especially in areas where we do not own the intellectual property.

I have expressed my corporate and individual commitment to supporting the MRAP program to Secretary Young and the Joint Program Office. General Dynamics has not been approached by the government about sharing MRAP vehicle designs.

Mr. TAYLOR and Mr. ABERCROMBIE. How are you incentivizing industry to accelerate production, and facilitate their production and manufacturing processes?

Mr. HEEBNER. The GDLS strategy to accelerate the current production rate is to utilize existing idle capacity throughout industry, and involve the current GDLS supply base from legacy products such as Abrams and Stryker. We also explained to a select group of suppliers that future business with GDLS is contingent on demonstrated performance in the manufacturing of MRAPs. This approach coupled, with an established Cougar supply base, enhanced our ability to achieve and exceed monthly contract schedules.

A similar approach was used by GDLS–C in its relationship with BAE Systems OMC, and the established supply base in North America.

Communication and loyalty to our key partners has been the cornerstone for moving forward. Through efficiency already achieved, the supply chain focus is to reduce current product span time and increase core capacity for these platforms.

Mr. TAYLOR and Mr. ABERCROMBIE. How do you feel about moving from monthly production contracts to weekly production contracts? What about daily?

Mr. HEEBNER. We have structured our delivery plan to support the need for mission-package integration at Space and Surface Warfare Charleston, realizing that large-quantity, month-end deliveries do not support the overall program objective. In most cases we have been able to provide a uniform delivery rate of MRAPs to Charleston throughout each month and will continue to pursue uniform vehicle delivery rates to assure the components are available for mission-package integration. As responded to in question three, by performing mission-package integration at the manufacturers' facility, we gain efficiencies in several areas. That could result in faster vehicle delivery to the theater.

Mr. TAYLOR and Mr. ABERCROMBIE. What impact is the UAW strike having on the IMG MRAP production and delivery schedules?

Mr. MASSICOTTE. On December 16, 2007, International Truck and Engine Corporation and the UAW settled their dispute and all aspects of production have returned to normal. There was no impact to MRAP or to our delivery schedule.

Mr. TAYLOR and Mr. ABERCROMBIE. Producing enough vehicles to meet DOD requirements will necessitate a steep ramp up of production between now and February next year. How confident are you that you can achieve the ramp up nec-

essary? Are your sub-tier contractors on board, especially considering you have some in common with one another?

Mr. MASSICOTTE. Since the date of our testimony we have successfully increased MRAP production and in December 2007 we exceeded our monthly commitment of 349 MRAPs. This monthly total is the highest total vehicles produced by any contractor in any month.

We plan to produce 430 vehicles in January and 500 vehicles in February. These increases in production remain a challenge that we work towards achieving each and every day. Additionally we work closely with each of our subcontractors individually to ensure they are prepared to increase demand along with us. This is not an easy task but I am confident that we will produce and deliver our future commitments. Furthermore I assure you that we will maintain an open channel of communication with the MRAP Program Office to identify potential problems as soon as possible and work together to resolve issues before they affect production.

Mr. TAYLOR and Mr. ABERCROMBIE. Ramping up to meet requirements will include hiring additional workers and some will need specialized skill and certifications, such as welding. How many more workers will be needed in the coming months to support production rates and how will they be trained to ensure they have the necessary skills?

Mr. MASSICOTTE. The MaxxPro is a unique MRAP vehicle. The chassis is assembled in our Garland Assembly Plant, in Garland Texas. This plant is a commercial plant and the assembly of the MaxxPro chassis does not require any unique skills. In addition, the MaxxPro incremental volume to this facility does not have a staffing impact. The armored capsule of the MaxxPro is assembled in our dedicated armoring facility in West Point, Mississippi. Our armoring process requires no welding and is assembled by bolting and bonding armored parts on the chassis. Our workforce in West Point, Mississippi, that assembles the armored capsule is 750 strong and can produce at our practical plant capacity of 600 per month with little or no additional hiring. We have invested in the existing workforce by carefully interviewing, screening, selecting and training our employees to build the MaxxPro vehicle. The skills required are basic automotive assembly skills. We've matched individual aptitude with appropriate production tasks. Our employees take great pride in the vehicles we produce and the support we provide to our armed forces.

Mr. TAYLOR and Mr. ABERCROMBIE. What are the advantages and disadvantages of installing mission equipment at other locations, such as the prime contractors' facilities?

Mr. MASSICOTTE. The advantages of installing mission equipment at our factory are significant and include time savings, reduced government costs and expedited delivery of vehicles to the Warfighters. Working closely with SPAWAR we have already identified and implemented 19 GFE (government furnished equipment) pre-integration activities that are being performed at West Point which enable the Government to perform only 'plug-and-play' tasks at SPAWAR and to ship the trucks to theater more expeditiously. These activities have been performed on all vehicles delivered since October. IMG is also poised to integrate the full suite of GFE if this is desired by the government.

Mr. TAYLOR and Mr. ABERCROMBIE. Have you been contacted by the MRAP Task Force or MRAP Program Management office regarding the sharing of technical designs in order to produce the most effective and complete MRAP vehicle? Would you be willing to share this type of information with your fellow prime contractors?

Mr. MASSICOTTE. Yes, we have been contacted and have in fact had an open session with the Program Management office and our fellow prime contractors regarding vehicle test characteristics and results. Even though each prime contractor has different survivability systems embedded in their designs, I believe there is a shared interest in collaborating and in providing the Warfighters with the very best equipment possible. International is willing to participate in any event sponsored by the Program Office or MRAP Task Force that promotes product improvement and effective sharing of lessons learned.

Mr. TAYLOR and Mr. ABERCROMBIE. How are you incentivizing industry to accelerate production and facilitate their production and manufacturing processes?

Mr. MASSICOTTE. As a worldwide leader in commercial truck manufacturing, we have a dedicated and attentive supply base that is well positioned to meet our production needs. For our new or non-commercial suppliers we have advanced millions of dollars to subcontractors, at our own risk, to prebuy and prepare for production; we have hired outside manufacturing expert consultants and assigned them to work specifically on improving sub-contractor manufacturing capabilities; we have dedicated significant engineering resources to suppliers to develop capabilities and set up pre-agreements to perform as required. In short we have worked very closely with each supplier of critical components to 'bring them along with us' to meet the

steep production challenges. The incentive for all our suppliers is to be with IMG as IMG continues to grow in the military arena and also it's the potential to either expand their current relationship or to become a new supplier to Navistar's multi-billion dollar commercial truck business.

Mr. TAYLOR and Mr. ABERCROMBIE. How do you feel about moving from monthtly production contracts to weekly production contracts? What about daily?

Mr. MASSICOTTE. We are building MaxxPro MRAP vehicles as quickly as we are able. At IMG we are motivated to get them built and delivered so that we can complete the transaction and move on to produce more vehicles. For right now, during an aggressive launch phase, I do not think that moving to a more definitive schedule would enable us to move any more quickly. But, once we achieve a successful ramp-up and our suppliers are stabilized IMG will provide and deliver to a more definitive schedule. Please note that IMG is communicating daily with Program Management office and DCMA to ensure that downstream activity is coordinated with vehicle delivery.

QUESTIONS SUBMITTED BY MR. FORBES

Mr. FORBES. Are you finding variation in trucks that arrive in Charleston, SC that are not integration ready? If yes, how are you dealing with that variation? Is there any congressional action that can help you in this area?

Secretary YOUNG. We are not experiencing variation of trucks arriving at SPAWAR Charleston, SC wit m each manufacturer's vehicles. The Defense Contracts Management Agency conducts quality assurance checks prior to acceptance of the vehicles. Additional quality checks are conducted during the integration process.

There is variation between the manufacturer's vehicles that required us, in the past, to conduct a prototype install of Government Furnished Equipment (GFE) for each manufacturer's variant. At this point, all vehicles except General Dynamics Land Systems—Canada's (GDLS–C) RG–31s, have been through prototyping and are progressing steadily through the integration pipeline.

The Department does not need congressional action with regard to vehicle variations.

Mr. FORBES. Why shouldn't we have C4I equipment installation done at the manufacturers rather than sending the trucks to Charleston?

Secretary YOUNG. All C4I equipment, referred to as Government Furnished Equipment (GFE), is procured by the individual Services. We determined it would be prudent for the Joint Program Office (JPO) to have one common place to receive, store, inventory, account for, secure, and integrate this GFE. That entity is SPAWAR. Completing all these tasks at multiple sights would have complicated the GFE tracking and accounting process.

Armored vehicle manufacturers do not inherently have the requisite skills at their vehicle manufacturing plants for detailed installation of C4I equipment or GFE. The JPO focused each manufacturer on its "core" capability to produce MRAP vehicles as fast as possible. The production ramp was very steep and included some level of risk. Asking a vehicle manufacturer to ramp up a specialized integration capability as well as produce MRAP vehicles would have increased the risk of receiving these trucks on time.

Now that the vehicles have all been prototyped (except General Dynamics Land Systems—Canada (GDLS–C)) and the manufacturers are achieving production ramps, the JPO is initiating an integration pilot with one manufacturer. Transition to integration by a manufacturer must be handled with great precision and planning to avoid any disruption to the pipeline of MRAP vehicles to theater.

Mr. FORBES. Is SPAWAR Charleston opening a MRAP integration facility in Orangeburg, SC? And if so, what is the purpose for doing so?

Secretary YOUNG. Yes. The Joint Program Office (JPO) and SPAWAR established a Continuity of Operations (COOP) site for immediate relocation of the entire integration effort from SPAWAR in the case of natural disaster such as a hurricane. Several sites were examined, and the Orangeburg, SC location was chosen due to its large square footage and immediate availability for occupancy. Establishing several integration lines at this COOP facility allows for seamless and continuous operations of MRAP vehicle integration without impacting the flow of MRAP vehicles to theater.

QUESTIONS SUBMITTED BY MR. SHUSTER

Mr. SHUSTER. In response to my questions at the July 19 hearing on Department of Defense plans to sustain and maintain the MRAP and what depots are involved in the planning process, I received a response that vehicles would initially be sustained and maintained via contractor logistics support (CLS). However, the Department would conduct a Depot Level Source of Repair (DSOR) analysis and a core logistics capabilities assessment, which will also consider Performance Based Logistics and public-private partnerships in determining the most effective sustainment support. Has the Department of Defense started the Depot Level Source of Repair Analysis (DSOR) and, if not, when do you plan to begin this analysis? Will you consider the Letterkenny Army Depot (LEAD) as a sustainment site? As you know, Letterkenny finished number one in military value for tactical vehicles in the 2005 BRAG analysis.

Secretary YOUNG. Yes, we have started the Depot Level Source of Repair Analysis and the Core Logistics capabilities assessment.

Yes, Letterkenny Army Depot, Red River Army Depot, Marine Corps Depot at Albany, GA and Barstow, CA are all being considered by the Joint community as potential depots for MRAP vehicle sustainment.

Mr. SHUSTER. Please tell me under your current contract when production of your vehicle ends. Would there be a production break if you received orders for new vehicles by the end of November. If so, what would that break be? Would there be an additional cost to you of ending and then restarting production?

Ms. HUDSON. Since my testimony at the 8 November MRAP hearing, BAE Systems has received two additional contracts, thus pushing forward contract end-dates and, consequently, anticipated breaks in production. Dates and production details for both the RG33 and Caiman vehicles are outlined below.

RG33: The follow-on contract for RG33 has a projected completion date of July 2008. We do not anticipate any break in production for current contracts.

Caiman: The follow-on contract for Caiman is schedule to be produced in May, June, and July 2008. We do not anticipate any break in production for current contracts.

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