

Industrial Committee of Ammunition Producers (ICAP)

Minutes of 86<sup>th</sup> Meeting  
February 5, 2007  
Washington, DC

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## **ATTENDANCE**

### **MEMBERS IN ATTENDANCE**

1. Mr. Timothy J. Bagniefski, NDIA (GD-OTS)
2. Dr. Dean L. Bartles, GD-OTS
3. Mr. Richard W. Bregard, Aerojet
4. Mr. Michael A. Dauth, NDIA
5. Mr. Mark DeYoung, ATK Ammunition Systems Group
6. Ms. Patricia L. Felth, DPM-CCS
7. Mr. Joel E. Gregory, American Ordnance LLC
8. Mr. Jerry Hammonds, BAE Systems Ordnance Systems
9. Mr. Robert R. Harris, Esterline Defense Group
10. Mr. Jyuji Hewitt, Joint Munitions Command
11. BG William R. Holmes, USA (Ret), D&Z Munitions & Defense
12. Mr. Joseph Homko, B-T Fuze Products
13. Ms. Patricia Huber, Joint Munitions Command
14. Mr. Rene Kiebler, Combat Ammunition Systems
15. COL Andre C. Kirnes, PD-JS
16. COL Ole A. Knudson, PM, Combat Ammunition Systems, Picatinny Arsenal
17. COL John L. Koster, PM, Close Combat Systems
18. COL Richard G. Palaschak, USA (Ret), MIBTF
19. COL Mark D. Rider, PM-MAS
20. BG James E. Rogers, US Army Joint Munitions Command
21. Mr. William Sanville, PM Maneuver Ammunition Systems
22. Mr. Patrick A. Serao, US Army-ARDEC
23. Mr. James Sutton, DPEO-Ammo
24. Mr. Matthew T. Zimmerman, PEO-Ammo-PM-JS
25. Ms. Amy C. Stoneburner, GD-OTS

### **OTHER ATTENDEES**

1. Mr. Robert C. Crawford, Munitions and Logistics Readiness Center
2. Ms. Candace Gischel, Battelle
3. Mr. Michael Hutchison, HQ, US Army Sustainment Command
4. Mr. Steve Mapley, US Army Joint Munitions Command
5. Mr. Steven Rosenberg, PM-JS

### **MEMBERS UNABLE TO ATTEND**

1. MG Barry D. Bates, USA (Ret), NDIA
2. BG S.M. 'Mike' Cannon, PEO Missiles & Space
3. Mr. James C. Dwyer (acting) Deputy G3, Support Operations
4. Mr. Ralph W. Hayes, El Dorado Engineering
5. MG Paul S. Izzo, PEO Ammo
6. Mr. Gregory A. Kwinski, ASC
7. Mr. James G. Loehrl, PARC
8. Mr. John G. Maniatakis, NI Industries
9. LTG James C. Riley, USA (Ret), Raytheon Missile Systems

## OPENING REMARKS

Dr. Dean L. Bartles

ICAP Chairman

VP & GM Large Caliber Ammunition, General Dynamics

Good Afternoon, we'll get started with some opening comments. MG Izzo could not make it today he had a death in the family. As far as we know, he will be at the Summit tomorrow. We'll start off with opening comments from General Rogers.

BG James E. Rogers

US Army Joint Munitions Command

Good to see everybody. It is good to be here. We have to start off with some sad news; we just found out that Mr. Wheeler passed away late last night. This was quite unexpected. Keep his family in your prayers.

On the positive side the ammunition community has a new SES, Mr. Jyuji Hewitt. It is great. He will provide continuity as the Deputy to the Commanding General at JMC. For me, it is a win-win situation.

This ICAP is a great forum that allows me to learn from you. It is great to continue the dialogue among all the folks that are involved. It is key and critical that we keep dialogue open and we are not afraid to call each other up and talk issues. I now know that most of you are not shy in this matter.

We are hoping that, in these next few days, we will be able to get some issues on the table and that we can work through these issues. We are currently in very dynamic times. We have the continued support for the ongoing missions in SW Asia, the Iowa /Milan competition, BRAC and many different things going on in the COCO, GOCO and GOGO arena. It is some interesting times across the board. We want to make sure we are partners with industry as we go forward.

Dr. Dean L. Bartles

General Holmes, any opening remarks you would like to make.

BG William R. Holmes, USA (Ret)

D&Z Munitions & Defense

Glad to be here, glad I can participate in this fast moving forum.

Dr. Dean L. Bartles

Agenda - Brief update from LCMC, General Izzo was going to be speaking to that and Jim Sutton will say a few words about that and we'll probably hear more detail tomorrow during the Summit from General Izzo.

Mr. James Sutton

DPEO-Ammo

It is good to be here with everybody. I'm not going to attempt what general Izzo would say and what he will say tomorrow as far as we know he is planning on getting in late tonight. We all do know that the LCMC was stood up at the end of November and the big day was lots of visitors and a full day of briefings and Mr. Bolton and General Griffin were the 2 principles. Spent the whole day at Picatinny going through all the pieces of the LCMC. It was a really good day. Representatives from key strategic partners being the other 2 PM's located there at ARDEC some discussion about Navy activities that are going to be relocating to Picatinny as part of a larger guns and ammo focus area. That work continues as well to get a Navy attachment in there on the installation. Since the 30<sup>th</sup> of November, we've had a long session at Rock Island with JMC. General Izzo and I went out there specifically for Jyuji's appointment but General Hortonson was there and peeled back the onion a little bit more there on LCMC. We're having another session in March back out again at Rock Island. Another session to try and gel the whole thing together. Mean while all the work goes on addressing the production issues.

COL(R) Palaschak  
USA (Ret), MIBTF

Are you taking questions? I understand the command is a 2 year provisional command, is that true?

Mr. James Sutton

It was stood up as a provisional command targeted for moving a provisional this coming October beginning of FY08.

Dr. Dean L. Bartles

Patti we're ready for your presentation.

## **AMMO SOURCING STUDY & DIALOGUE**

Ms. Patricia L. Felth  
DPM-CCS

I have a few charts on this; we expected that there would be a lot of dialogue so I brought my notebook so I could take notes. I hope you are all feeling talkative because we have a lot of time here.

Slide 2

Couple of months ago, General Izzo and Jim asked me to co-chair a study on the Ammo Sourcing Studies. The idea is we have individual studies at sourcing for small cal ammo, this is supposed to be an umbrella study that looks at the whole ammo supply network, the whole ammo supply base. Where do we get our ammo from, in what ways does that supply base satisfy our needs and in ways does it not satisfy our needs. How do we balance the objectives of our ammo acquisition strategies, the goals we are pursuing when we go out to buy ammunition, with the goals of our industrial base management? I've listed some of the things we seek in our acquisition strategies: timely high quality ammo production deliveries; responsive, reliable committed suppliers; people that are committed to continuous product and process improvement are some of the things we are trying to bring to the ammo acquisition. Updated designs and materials, effective supply chain management being able to flow down our quality

requirements and schedule requirements to Sub Tier suppliers, reasonable prices. The most fundamental things we are looking for in our ammo production contracts are quantity and price; those are just the beginning of what we are actually looking for.

On the other side, Industrial Base Management, what are we looking for in our supplier base? Meet high quality production capability, be flexible and agile, and be able to respond to changes in the environment. Economy, have efficiency, right size capacity for peacetime production and ability to surge to meet wartime requirements.

That is probably the requirement that is the most challenging in our planned objectives for as long as we have been managing ammo acquisition. We need to modernize that base and look for ways to synergize the use of government owned and commercial facilities.

#### Slide 3

We have 2 major sets of objectives, similar in some ways but in some ways it is a basic competition. The way we talk about going about doing it, 1<sup>st</sup> we have to figure out what we need, what do we need in a supplier base? We are going right up front to a very quick analysis of requirements, ability to produce efficiently and economically our peace time requirements. Who are we currently using, who are our real suppliers of ammunition and we have to try and identify that and the capacity. A lot of that information already exists in a great database IBAT and we are going to do a quick analysis of that by product line. We start our analysis organized by product line then dive into subtier components. Materials and processes we are going to get that to a sub-tier level like propellants and explosives, things that are more process oriented. Going to try to come up with a disciplined quantitative approach to address the variance between requirements vs availability. The major discussion is that we will find over capacity to our needs in some areas. We also want to make sure that we identify emerging technologies in our ammo product lines and then identify areas of under capacity or types of capability that we need that are not in the traditional or existing supplier base.

The idea is to give LCMC managers 2 things; one is a more focused analysis of the areas where we find mismatches between requirements and availability of the supply base. So on a specific case by case basis, identifying specific sectors or areas where there is a mismatch and recommending general solutions and perhaps more in-depth study for those areas or a recommendation for those areas, what to do about those areas. Another thing is a more generic approach, some kind of a tool, some kind of a decision process model that will tell us how we should consider the Industrial Base objectives in determining our acquisition strategies and how should we consider objectives of our acquisition strategies in our Industrial Base Management. It was a given from General Izzo and General Rogers that we will apply Six Sigma techniques through out this process.

#### Slide 4

This just an idea of how we would start out, Requirements vs Capability and Capacity.

#### Slide 5

Study Plan is a government IPT team with membership from PEO staff, PMs, & JMC, & LCMC servicing acquisition centers. We contract with industry to conduct this study for us. We have a goal of getting a product out this summer. And it appears it will be an interim product and probably with some areas of more in-depth study continuing for several months after that. The things that we think we will do as a follow-up to the study, 2<sup>nd</sup> half of the study are more in-depth looks at the specific areas where

we identify mismatches of requirements/capabilities. And the idea is to link it to the ILS Framework, a study that was already done by the JMC logistics network.

Slide 6

We are trying to do this study as a way of looking at making sure we bring all life cycle management phases and functions to focus on acquisition strategies and industrial base management and the interplay of the two and we are expecting to come out with an approach on how to integrate our acquisition strategies with the industrial base.

Are there any questions? Anyone would like to offer their thoughts?

Mr. Jyuji Hewitt

Joint Munitions Command

Linking it to the Integrated Logistics Study (ILS), what we are really talking about is bringing back the study of the overall prime value chain. We're all recognizing that this is, also with the ILS, is just part of the bigger prime value chain, what we are trying to do in linking the 2 studies together. For our contract folks, this is what we are trying to get at, the whole picture across the board. There is a lot more than this piece and the ILS but these are 2 big processes, for the whole prime value chain.

Mr. Robert R. Harris

Esterline Defense Group

How do you link what you are doing here in this study with the subjects we brought up last ICAP meeting? That is the survivability of the base and the soft landing? Can you take your study that far?

Ms. Patricia L. Felth

DPM-CCS

To me this is a big complex problem that we have been dealing with for decades and all I can do is agree with your question. What we are looking for, and when we identify requirements, again that is the need for soft landing, to talk about survivability all grows out of the huge variability of peacetime requirements and wartime requirements. So it is a question that has been around forever. How do we design and manage and cultivate a base that is efficient for peacetime production and also gives us the capability to do wartime surge requirements when we need it. What we are trying to do is not rely only on ways we have in the past. We know what problems are of that approach that we have always taken, we are not criticizing any of it, that base exists for a reason, and when I say supplier base we are including government owned and operated facilities, government owned contractor operated facilities, and contractor owned contractor operated facilities. How do we deal with that? Is there anything we can do to improve upon how we have traditionally run our industrial base management and our ammo acquisition?

Mr. Robert R. Harris

First, I think many things can come out of your study (that you will see along your path) that is going to help identify some of the answers. I think it might be appropriate to keep many of us in mind as you are going through this for many of us have considerable experience in Industrial Base issues such as these.

Secondly, I don't see where the private sector is involved in your study at any stage, and I am sure many of us are willing to assist.

Ms. Patricia L. Felth

Involved in conduct of the study?

Dr. Dean L. Bartles

About 3 or 4 years ago, I remember a room at Rock Island with 50 people, there were 3 or 4 industry participants that were invited, John Maniatakis specifically asked for to get that perspective, it might be worth considering including a couple of hand picked people that participated in some kind of IPT format.

Mr. Robert R. Harris

If anything, maybe even bring even bring the ICAP in on what's going on, we have sector reps here anyways.

BG James E. Rogers

That is a great idea; we need to make sure we bring in both Industry as well as Government and make sure we're in sync.

Mr. Matthew T. Zimmerman

PEO-Ammo-PM-JS

One area of our industry that would really help out is helping validate your capabilities, the capacity you are operating with to feed the variance assessment that Patti was talking about. That would help with the industrial based assessment tool where we go out periodically with surveys and questionnaires.

Mr. Mark DeYoung

ATK Ammunition Systems Group

You did a review a couple of years ago looking at capacity looking at surge and surge was undefined so there was this big nebula what do you want, that kind of bogged things down, but did we ever complete that study, did we ever establish capacity, did we ever establish the search, did we ever establish what we wanted to establish in terms of industries capacity, capabilities?

Mr. Matthew T. Zimmerman

I think we discussed a couple of years ago that is in response to Mr. Bolton's question. What can we do to accelerate surge? And we did help with some input on that with Mr. Bolton, he was looking at certain things relative to what could be done administratively within the Army and acquisition to speed things up as well. So I do think we can close that out as part of these strategic planning activities.

Mr. Mark DeYoung

Does that study support the foundation that Patti is talking about?

Mr. Matthew T. Zimmerman

Hers is much broader in getting into more decision making, it is a quantitative way to help with making decision making on how acquisitions are designed and implemented.

Mr. Mark DeYoung

I guess that is where I am trying to lead, what is the deliverable? At the end of your study, your slide said winter 2007 you will do something? Do you publish a report, do you publish policy, do you establish acquisition strategies invoke something or is it just a study and you wish to record. What is the deliverable?

Ms. Patricia L. Felth

There are 2 deliverables. One is in-depth study and recommendations for sectors where we identify significant variances. What should be done that is determined by the circumstances of those individual sectors. The other is the general decision model or tool for assessing how we consider industrial base management in our acquisition strategies, and vice versa.

Mr. Mark DeYoung

What should be done in terms of bridging wherever you see variances and capabilities requirements capacity of demands?

Ms. Patricia L. Felth

Right, how do we deal with that? If there is over capacity in the area, how should we deal with that? If there is under capacity in an area, how should we deal with that? If there is a mismatch up of capability we have and maybe the technically driven capability we'd like to have, how do we deal with that? And we are assuming that the answer is not going to be the same for every problem.

The second deliverable is the idea of a decision making tool like Matt referred to, that we can come up with some type of decision process and factors to consider that consider all life cycle aspects of the ammo acquisition lifecycle.

Mr. Mark DeYoung

So you are going to do that unless you understand future requirements which were the problem last time? Are you going to do a situation analysis where you alter requirements and then you do an analysis that says peace time requirements and war time requirements and surge requirements and 2 regional conflict requirements, is that what you are going to do in this study so when you are done you have a data set that says in this situation, this appears to be the issue and this therefore would be a recommendation on how to proceed and in this situation this is the outcome this is the variance and this is the recommendation.

Ms. Patricia L. Felth

You are giving me some good ideas about what we need to do.

BG James E. Rogers

We have to be able to articulate the sensitivity to those scenarios, so the answer would be yes. We must be able to articulate the ramifications of this issue. The model has got to be developed with enough of the analytics that we believe are accurate. We need to do a sensitivity analysis. We need to determine the outcome, and then change the variables a little bit, to assess the sensitivity. We must be able to articulate that in a form that everyone understands; that is really a challenge.

Requirements are probably our biggest challenge. We think we've adequately hit the requirements challenge with the Army. We are now working with the Navy, Air Force, and Marines. We've been working with the Navy now and the CNO is very interested in our studies, so we are there for the Navy. Now we're working with the Air Force to make sure we are getting all their requirements so we can better plan and support all Services requirements.

They have done a lot of work in the Army G3 on the quorum 13/quorum NT. Actually they didn't have much confidence in quorum estimates, which are light years from where they used to be. The Quorum requirements were a joke in the Department of Army. The Department of Army reworked the whole model and put in factors they estimate will be correct and they have done a number of variations of it and did a sensitivity analysis. Army now feels that quorum 13 and quorum NT (near term) are about as accurate as you are going to get.

I believe this is a success story right now. Now that we have the numbers, we have to figure out how much to buy, given these are the facts. This is where we think we are going, and then do variations: if you are only going to buy this much, what is it going to get you? If you want to buy the whole thing, this is how we need to spread it out. I don't think we know what we need to spread out yet and that is what this study/strategy needs to do. We need to better articulate our viability for the future.

Mr. Mark DeYoung

I think that maybe for the GOGO's you could do that with an industry team absent but for the GOCO's, for the commercial base, I don't know how you'd ever go through a study and accomplish an objective and deliver what was mentioned without input, participation and data from those sectors.

Ms. Patricia L. Felth

When we talk acquisition strategies, generally our acquisition strategies are competitive or non-competitive. If there are competitive, it is best value, emphasizing technical capability, quality process control, or price driven. We are trying to do best value to get away from being price driven because we understand the effect that price competition has on the industrial base. There are representatives here of government owned facilities and contractor owned corporations/organizations. If we do competitions, which are kind of a baseline approach of the federal government, competition that is always an open ended question, someone might win other than in the incumbent. With that assumed, what that sets the stage for is, our supplier base may be dynamic, and it may not be static. The only way that you keep your supplier base static is direct work into it and not award work competitively. If we go competitive, it allows for the possibility that somebody new wins and a new facility capability comes into existence, what about the old capability? Part of that is an issue of survivability. It is not just the requirements going up and down but also what about when the requirements move, what about when the work moves to a different facility. Which parts of our supplier base are important enough? We want to be dynamic; we want to move forward with technology. But to what extent are there parts of supplier base that should not be allowed to go out of existence. A dynamic base assumes that parts of the base may go out of existence; parts of the base may become obsolete and not be needed anymore. Or parts of the base may change to keep themselves permanent, keep themselves relevant.

Mr. Robert R. Harris

Mark mentioned studies that were done, one of note was the study done by PEO Ammo and JMC, (the Industrial Base Strategy Study). All of us that sat around this table at the ICAP, upon reviewing it, agreed that it was a good study. Those 15 to 20 recommendations that were identified which were the right things for the survivability of the base. I would recommend that you take your study and results that you are anticipating and compare that with the results that were in the previous study.

Mr. Matthew T. Zimmerman

The study has critical capabilities that industry cannot provide. Then there is the middle block that has capabilities that industry can provide but don't have sufficient capacity. But then the bottom tier, there is capability that industry can supply.

Ms. Patricia L. Felth

That is where we are starting out with this requirements analysis just to revalidate it because things have changed.

Mr. Robert R. Harris

There were many recommendations, about 20 or so key items that were required to keep the industrial base strategically viable such as multi year contracts, bundling things together, etc.

Mr. Matthew T. Zimmerman

What came after that is the industrial base strategic plan that has gathered all your thoughts and that was distributed.

Dr. Dean L. Bartles

Strategic plan was distributed.

Ms. Patricia L. Felth

So those are some possible outcomes, the things about multi-year contracts and bundling and the Department of the Army came out with the policy against bundling but may be what we need is the study that comes up with recommendations where we've been as a 2 star level command, take it to HQ DA, do what we can to influence policy so maybe some of our outputs are to take action on things like policy.

Mr. Mark DeYoung

When Maniatakis was in the role, he did a lot of studies and came up with regular read charts and he looked at capacity priority against requirement, against availability, it seems like it is a cycle thing. When someone comes to me and wants to do a study on something I've been doing 20, 15, 10, 5 years, we want to study it because I don't know what I've been doing? So I just want to make sure it is not my prerogative as much as my curiosity now what the context of the study is what the outcome is and why it is going to be significantly different that the studies I've seen done for 10 years and how it is going to shape that policy strategy and decision making. I'm interested for it to happen, I just want to make sure in my own mind why it is different.

Mr. William Sanville

PM Maneuver Ammunition Systems

It is probably more for us. As we go through and look at acquisition strategies for St. Pete affecting Small Cal ammo, should we restrict nitro cellulose? Normally our default position is to compete, ok so then what is the true cost of my ammunition if I don't restrict nitro cellulose, I can go off and buy nitro cellulose from wherever yet you have capability over here that is required for other products/propellants so to us it is like a framework or tool for us to use to be doing the things we are suppose to be doing anyways, what we are trying to do right now, is shaping and developing acquisition strategies, providing a way for us to get our arms around, hey what is the true cost of all these things.

Mr. Mark DeYoung

That makes a lot of sense, if you look at what might you do to the supply chain to drive ammunition cost you will miss a big piece of another element of cost which is the cost of the assets you own in the government or Army which come with a cost, they are not free, that always has to be picked up and factored in or you'll miss it.

Ms. Patricia L. Felth

But in order to consider that cost you have to know that cost and some ways our acquisition, and now we're talking organic base because there is usually a cost of retaining a large base but there is a cost of losing it possibly, but the cost of retaining an organically owned production base is not necessarily known because of the acquisition strategies that we've used for our facilities contracts can obscure the cost. With a zero cost facility contract, we don't know the exact cost of everything so the acquisition strategies we're talking about influencing are not just the acquisition strategies for ammo production but also the acquisition strategies for our facility use contracts.

Mr. Mark DeYoung

That is good, they are absolutely linked. I would suggest a huge cost to the government of commercial, because if you don't maintain commercial at a level which returns on investment they will stop, and you will spend a ton of money & time trying to find somebody, why would you want to re-qualify to run this spec and to get somebody in production? I think the whole supply chain is driving value or it is driving cost.

Ms. Patricia L. Felth

The conventional wisdom is if a production capability goes out of existence, it will take a long time to get back up again. Maybe what's new about now is we just had the experience of being in a war for 4 or 5 years, we've resurrected production on many items that have not been produced in 15 or 20 years, and we have pursued different ways of obtaining that ammunition, producing that ammunition. In some cases we have found there is a fairly dynamic ability to recreate/reestablish production capability in a fairly short period of time. Our experience in some of those cases is what we want to study, how you compare that with the cost of maintaining a facility and not using it for decades, especially when you consider technology is one of our key objectives.

Mr. Mark DeYoung

With this volume it is a great time to come back into defense. It would not be nearly as attractive if the volumes are what they were a few years ago.

BG William R. Holmes, USA (Ret)

D&Z Munitions & Defense

Next step is what we look like 2 years from now.

Ms. Patricia L. Felth

Old way is, lay it away, we've done that. Does that work; is there a better way than laying away unused capability?

Mr. Rene Kiebler

Combat Ammunition Systems

Echo what you said, for example in mortars and artillery HE, we are evaluating several alternative IM fills. Several of these explosives are showing promise in the early stages. If they are successful, it will result in a shift in the production industrial base. I think that it is really important in terms of coming out with the right answer, where do we see technology going in the coming years and you don't start looking at capacity for something that is going to become obsolete in the in 1 or 2 years.

The second thing I wanted to mention, I was over in Europe couple weeks ago and I took a tour of a facility that was manufacturing a propellant component. One of the things that I took away was the manufacturing this material was about 10% of their business, the other 90% was pharmaceutical grade chemicals going into other drugs and things, fertilizers, a whole family of products. Basically, we walked through his entire production line from raw material all the way through the end and each step through the process, they would tell me, here is where we spin off this product to a commercial product, here is where we spin off this component to this commercial product, all the way down the line until the very last step when the transition from commercial Production to military production occurs.

If there are areas where we can help our military industrial base contractors to foster commercial spin-offs, we would like to know. If there is a commercial outlet for some of the intermediate stages of product and we can identify those then we could take steps to allow commercial products and help pay for industrial overheads and help to shift the focus where we could have another source of revenue. It just amazed me, every step of the way, every single product; they were using something in their process for commercial products. It was very tightly integrated.

Mr. Mark DeYoung

Is that a Government owned facility?

Mr. Rene Kiebler

No, it is not.

Mr. William Sanville

Huge hurdle to that is, the huge hurdle is us. Would love nothing better than to have small ammunition come off the line and have the robot pick it up and put it in mil spec packaging or a federal box, yet in many cases we 40 year old tech data, it is so restrictive that we tell you in some cases what machine you have to do it on and how to boil water. That makes no sense.

Mr. Mark DeYoung

That is true and I don't mind sharing, we build of our DoD ammo at federal where I have a dedicate machine, I have to dedicate the packing line, I have to dedicate everything. I think your model is

great, we just have to figure out how to remove the obstacles and frankly in some categories of ammunition we have opportunity, when you buy commercial and military.

Mr. Robert R. Harris

We see this happen, particularly in Europe, because of small volumes of ammunitions compared to the U.S. Sounds like you visited SNPE, one of those companies that make nitrocellulose. They make commercial grade nitrocellulose and then at the end of the line make a little bit of ammunition grade material. There are some very interesting models in Europe producing ammo @ lower volume. Maybe we all need to think about this. We bought a business in Europe, for example, last March that makes some of the same products that we are making in the states at very high volume but with very different techniques. To your point, I think there are things we can learn to do differently in this country based on where we see things going in the future.

Ms. Patricia L. Felth

I think we also know from our experience there may be cases where a commercial product can tolerate a larger range of variation in performance or output than a government product can and for good reasons. Our contracts and our government engineering teams and the PMs need to drive that, need to make sure that we are validating whatever requirements that we are putting into our contracts but once you do that to make our products economical and use the existing supplier base and make it base economical, we sometimes use commercial products, knowing that we cannot use everything in the whole spectrum. We can handle that. One thing we need to do is to be open to adapt in our designs. Recognize when the commercial process is changing, it may have an impact on the variability of their product and we're able to qualify a change to make sure it doesn't affect the performance that the old process is producing. The other thing is, in our suppliers we don't just want the ability to produce to a TDP for a given price, what we are looking for are suppliers that are alive and are active in their technology area and know what is going on in their industry and come to us with suggestions to say if you let me, I can use a new production process or a new source of material, if you will allow me to bump up, let's work together, allow me to move my sources forward with existing technology. That is where our acquisition strategies make a difference, we have to have flexible enough contracts and have our contract agencies understand that we are going to be making changes. Changes are not bad in an ammo production contract; changes are a good thing if they mean we are adapting and responding and being flexible and agile to respond to suggestions from our technically knowledgeable supplier base that will help us stay current in the industry.

Mr. Joel E. Gregory

American Ordnance LLC

The single biggest deterrent to that model in this country is the complexity of doing business with the Government. You described a commercial operation that also produces military products, as opposed to a military oriented organization that also produces a commercial product. I know from my own experience, that when you start talking to a commercial company, say 90% of their products are commercial and you say "I want you to produce this 10% for me", and you start talking about the cost accounting standards, the data cards, and all the baggage that comes with doing business with the government that organization that is 90% commercial all at once realizes they can't do both because they have to fundamentally redo their accounting systems they have to hire a whole new set of people to do contracts, and they face the enormous barrier to entry for a commercial organization to do a small portion of their business with the government.

Mr. Robert R. Harris

I think that is true but I remember Norm Augustein had a great quote many years ago about defense companies going into commercial fields. I think his comment was that the results were unblemished by success. I think the world is different today and we're different and I think we've got to figure out where we can take advantage of different capabilities and different ways of doing things because the world has changed a lot in 15 years. I think it is a challenge, but I think we have got to figure out how to do it differently.

Mr. Joel E. Gregory

Talking once again about fixed oriented companies going into commercial business as opposed to the other way around. The other way around is tougher.

Mr. Richard W. Bregard

Aerojet

Every time we've tried that, we've had to set up a separate company to handle the commercial accounts. When we went commercial we had to set up a whole separate accounting structure to handle the commercial accounts.

Ms. Patricia L. Felth

If you want to let us know how we can be flexible, agile, what can we do with our acquisition strategies, what are the obstacles in our industrial base management approach. There couldn't be a more expert group that is sitting here right now.

Mr. Mark DeYoung

Patti, are you going to revisit that by chance, privatization, those kind of things? Because prior to 911 they seemed to be at least some momentum talking about privatization and that way industry gets the monkey on its back and we get the big infrastructure that must be supported therefore we will be motivated along with those plants with commercial and military products and some of us are either dumb or interested in that idea. Is that just policy off table now? Because it seemed like after 911 there was much more of protectionism by the government of its military infrastructure, less willingness to privatize less willingness to loose control of the assets although we don't want to pay for them we want to keep control of them. Are you going to look at that?

Ms. Patricia L. Felth

I know answer to your question Bob, would that be possible. That is why I'm starting with not just looking at ammo production that occurs in government facilities. We are looking at the whole population, the whole universe of ammo production and some message of that answer, where do we get our ammo? It is not all from the organic base. That would help overcome whatever the resistance is that says we're against privatization. We want security; we want to make sure have the source of supplier.

My first statement is that when we do best value contracting it takes the pressure off of price so that price doesn't have to be a disadvantage. Price is probably the first obstacle which operators of government owned facilities have identified as a problem. But if competition based on quality and process control is going to be one of the answers, one of the things we really want on our acquisition strategies, what are the obstacles that prevent government owned facilities from competing equally?

Mr. Mark DeYoung

There is a lot of experience, ATK would be happy to help look at that. We've tried to commercialize DOD capacity several times. We've tried to do it with rate structures that allowed us to have commercial type rates. Systems, accounting systems that allows us to drive commercial accounting system at a military plant and ran into all kinds of issues. So if you want any help from that, we'd be happy to supply what did work and what didn't work. At the end we were forced to dismantle a lot of what we thought would work commercially because it was intolerably. The DCAA and the cost accounting standards even though we were trying to create separate structures and separate sets of books we almost have to go to separate company to protect yourself from DCAA, IRS that wants a finger in how you compete. As you go through that if you want input I'd be happy to talk to you about that. I'd really like to see us figure out how to do it, I think everyone in the room would but instead of talking about all the reasons how it can't be done, I'd really like to figure out how to get it done. If we can help you with that we have some good, bad, and ugly experiences.

Ms. Patricia L. Felth

What else I am looking at is, the government facilities contracts don't come up very often, but when they do, how can we structure those contracts to support the kind of things we are trying to do?

Mr. Mark DeYoung

Part of that will always have to go to cost structure. The securities department, the over arching information and reporting requirements. ARMS is a challenging program because of that, we wants ARMS to motivate industry to invest in plants and bring tenants. We show the tenants the book of compliance requirements being an ARMS tenant when he wants to come in with only 20 people. Then look at the risk the corporation takes to sponsor, and the liability associated with bringing in an enterprise, and it's no wonder it is a tough program to market. Then again we can show you the good, bad, and the ugly. We have some that worked really well, we have some that didn't work well at all, we have some that should have worked but died, I'd be happy to walk through that with you as well.

Mr. Joel E. Gregory

Building on that thought, I've been making a plea for 2 or 3 years now with this forum for some sort of a master plan for the GOCO's, that isolates what the government wants to retain for current identified production; what they have in the way of unused capacity; what they want to retain for future growth; and that portion of the plant the government believes should be made available for arms. I've made this plea multiple times and I'm still making the plea, because I believe we are being buffeted back and forth by multiple forces because there is a lack of planning for the future of these plants. Perhaps your study could spin off as a product; a master plan that identifies, specifically, what portions of these plants should be made available for arms development.

Ms. Patricia L. Felth

If we can do a comparison using the Army's own requirements data that quantifies even with whatever cushion for security you want, how much of our retained capacities are necessary and how much is excess. That would be something I could come out with.

Mr. Joel E. Gregory

Getting down to the Dick & Jane kind of thing, how many buildings are currently emptied should be retained for government growth?

Ms. Patricia L. Felth

Ok, I'll write it down.

Dr. Dean L. Bartles

Come back to me after you've had a chance to talk to your government members of this committee and give me ideally what you would like to see in the way of the number of industry participants on your committee possibly suggestions on what sectors specifically you might want represented, I'll even take suggestions of individuals by name as you'd like to see on the committee, I can't imagine you would want too many. I'll take your inputs and I'll confer with the 2<sup>nd</sup> leads and see if we can't give you a couple of people that you think might be helpful.

## SECTOR UPDATES

Dr. Dean L. Bartles

Next Item on the agenda is Sector Updates, specifically our customer asked for us to come prepared with any kind of Six Sigma successes that we might want to share with our customers here today, unfortunately Ralph Hayes, who is the sector lead for Demil was unable to make it today. John Maniatakis is the sector lead for Large Cal is in court. General Riley got called in for another briefing this morning so he was unable to make it.

So that leaves only a few sector leads here today, so in random order, Mark.

Mr. Mark DeYoung

I have 6 slides to briefly to walk through, from the Sector Small and Medium Caliber, this is a medium caliber slide. We went out to all participants of the sector and requested input, most of what you are going to see is my own. I did receive 1 other input from the sector which is Galion LLC.

Slide #1

In this first slide is M789, within ATK we call our Lean Manufacturing and Six Sigma by the name PES, Performance Enterprise Systems, that is the ATK system for Six Sigma Lean Manufacturing production. Within PES, we have a couple of what we call PES universities, those PES universities are lead by black belts that have been training in Six Sigma and PES for sometime. We have a PES university at Lake City and we have a PES university in our Aero Space business in Brigham City, Utah.

In this 1<sup>st</sup> slide, M789 Lean Manufacturing, upper right hand corner, that is the original shop form configuration in West Virginia. After we shut down the twin cities Army ammunition plant a couple of years ago, we relocated that manufacturing capability for fuzes and projectiles to a new building and a new footprint in West Virginia at the Navy plant, ABL, Alleghany Ballistics Laboratory. The upper right hand corner was how the line was laid out at twin cities, and the need not to confuse a move with a product change we tried to replicate all the processes all the designs and all the specifications in manufacturing tolerances in West Virginia. Some would say the best time to fix your line is when you have it all on trucks and you can move it and lay it out in a new way. I've moved ammunition plants before and you never want to take on that process. I would caution you, there are too many variables and you find yourself not being able to replicate the parts and you can't decide whether it is the

equipment when you moved it or whether it's how you set it up and changed your processes in your new building. So we consciously new it was a 2 step dance. So we set up the 1<sup>st</sup> step to replicate how the ammunition had always been manufactured for decades. And we knew that plan B would move to the lower right hand corner, which is how the line is set up now as Step 2. Once were able to replicate, get the first articles, insure were knew what we were making and how we were making. We reinvested in the line and stream lined it under PES process and Lean Manufacturing in the lower right hand corner. It gives us single part feed, gives us a lot better control of our quality, gives us a lot better understanding of our capacity, capabilities, outputs and input streams are and we value map that. In the lower left hand corner, on this medium cal round, you can see the expected results and I say expected only because we have not run this new line for a complete duration of 1 year yet. So far we've seen a 15% reduction in labor 75% reduction in material handling time and path required on that product and anticipate over 50% reduction in manufacturing cycle time in that new line. That is significant improvement to how M789 have been manufactured for the last 20 years.

Mr. William Sanville

Do I get a rebate check?

Mr. Mark DeYoung

Absolutely not, I might make this program profitable.

BG James E. Rogers

Why didn't you reconfigure the line at the old place to be an optimal one, before moving it? In other words, why not optimize the old set up before moving it? Why didn't you optimize it at the old site first so you knew it worked under those conditions and then moved it?

Mr. Mark DeYoung

Part of the reason is because when we did this move we were able to get modernization funds directly incorporated by Senator Burns of the plant. We bought some new equipment in WV which he bought for WV that went into the WV line. So part of the pacing for laying it out was using WV investment to help create a WV line.

Slide #2

I have a couple from Lake City, two examples and we have several, we've done 200 Six Sigma PES projects in the ammunition systems group in the last couple of years. We are also doing them in our commercial site as well. I just picked a couple that Karen Davies of Lake City wanted to talk about that is recent, they are on 762 which is a critical delivery item for PM-MAS. One of them is a vision system and the other is a Six Sigma process by which we inspect and make sure we have calibrations in place. You can see scrap production on 762 case manufacturing scrap has been reduced by over 50% thru these 2 projects.

Slide #3

First slide commercial is looking at disciplining the process of which we establish calibration of procedures they are performed in the beginning of each shift on the case line. This required minimal investment but it required significant improvement in the discipline on the line thru Six Sigma procedures to make sure we thought through all of the ramifications and all the policies and procedures necessary to discipline the line. What you see is a forecast that we put together which targeted a 50% reduction in scrape in case. I'm an advocate of going up stream whenever you do a Six

Sigma project as far as you possibly can on your root cause. The challenges at Lake City is for years and years, decades and decades we find case scrape in the loading operation. What that means is you have a lot of value that you put a primer in it, you put powder in, you've machined it, you've loaded it and then you are kicking out as scrap at the end. It is a very expensive way to run a railroad because you add value to bad parts all through your line before you find them. One of the keys we're driving at Lake City over the last several years is to make sure we drive root cause upstream and address these at the source of the problem instead of catching them thru inspection techniques down stream which has been the tradition of Lake City and small cal. This one is really establishing disciplines and procedures of processes which allow us to catch mistakes early.

#### Slide #4

This is a Vision System which we invested in, (this is an ATK investment). A vision system allows us to look at taper defects splits and folds on the neck and the shoulder of 762 ammunition. We've had significant improvement from this project as well you can see loaded cartridge scrape is down to 1.72% to .72% so it is a significant reduction again, cutting basically the scrap in half by putting vision systems at the root cause upstream in the manufacturing process so we are not adding value and creating higher expenses type scrape later in the process. If you look at the process below, you say gee nothing changed on those charts; you still do taper loading and visual scrap. That is exactly right. With real changes where we went upstream to taper areas, put in vision inspection, kicked out bad cases instead of letting them escape to the lower stream operations and then letting them escape and catching them in visual inspection loaded cartridge where you would typically do final inspection on your product. Once again, it is a great project; you can see the payback has an internal rate of return of 98% discounted payback with a 10% discount rate paid it self back in 8 months. So it is a great project, it is the kind of thing industry can do if it is a firm fixed price contract, we can invest in quality improvement and improve profitability the program and make sense to industry when you do that. So that is another great project on Small Cal.

#### Slide #5

This is the slide I received from Galion LLC, Dick Van Devord sent this to me. This is a little different from the ATK, this one really is an investment in new equipment and they made a decision to invest in this new paint and coating equipment based upon Six Sigma disciplines that they employed at looking at the project and the investment. So what they basically did was to look at their paint line which they were using in the market system it was a 25 year old line, it was functioning they were able to get to first article and produce quality parts but they have high maintenance cost and it was labor intensive and downtime. So they looked at this and decided how can we go through this whole piece of equipment and improve it and what they basically decided to do was invest in a new line. So they invested in a new line.

#### Slide #6

They basically put in a new line, invested in it to get more uniform coding, and they were able to take on 20mm the capacity per gallon of paint to 7500 projectiles versus the 4,000 projectiles per gallon that they were painting previously, so they had a nice efficiency improvement. Paint is going on the projectiles instead of up the stacks which is good environmental stewardship move for Galion. They don't have nearly the volatiles and the airborne emissions they had before from their paint line. No longer restricted in the volume of paint used in any given day, they had an EPA restriction which constrained their line because they were losing so much paint to the environment that is no longer an issue because of the efficiency of the new equipment. They can now paint 24,376 projectiles, 20mm,

in an 8 hour shift compared to previously 20,552, so they have a 20% improvement in thru put as well. It is a fully automated working system that will improve the quality and reduce the labor and so they are enjoying benefits from that which will pay back their investment.

Dick's point on this slide that he wanted me to communicate to you from the sector, although it took a significant investment in Galion to drive the paint line it made sense to them it paid back the Army and the customer and the Air Force in this case 20mm will be the benefactor of that through improved quality. Galion is a benefactor through improved efficiency, improved compliance to environmental and it ends as being another example as a win-win kind of Six Sigma approach to product.

Dr. Dean L. Bartles

I apologize for no one from GD-OTS giving you any inputs. After the meeting, please let me know who you asked and I will make some calls.

Dick do you have anything from your sector sir?

Mr. Richard W. Bregard

No, I don't have any specific charts but from talking to them. It is generally following 2 lines that Mark just brought up. The issue of using Six Sigma to determine if these investments are worth it, is there a payback but the same application of tools across the product line and the value is pretty consistent there is also dialogue on using Six Sigma tools into the soft areas, I'm going to call them the support areas and there is more and more of a trend across the base of pushing Six Sigma tools into finance center. How to use that within the supply chain loop in pushing that down into the vendor base which some of us are seeing big pay backs on as we push that down further. So talking with each sector that seems to be the trend. It is being used, there are payoffs. From the Aerojet side of the house we just took \$150,000 reduction in utility bill on environmental clean up cost thanks to Six Sigma tools how we applied to environmental mediation just to save on electricity.

Mr. Mark DeYoung

There is a couple of cases, if you are paying attention to the Wall Street Journal, the CEO of Home Depot was basically fired by his board and part of the reason is because he failed to deliver on his Six Sigma commitments. And it was not the pantesia he described Six Sigma to be. So like any other program, back in the 80's it was quality is free and that was the big program and quality circles and like anything, you have to be careful with Six Sigma because it is not a pantesia. It requires a lot of discipline and requires a lot of gray matter to be engaged when you make those decisions, even in the commercial businesses I operate, we've done Six Sigma projects in Human Resources, all my Human Resource's department have been through Six Sigma projects, all my customer service departments have had Six Sigma projects, so I would agree with you, it does not have to be hard goods. But nearly any areas that have disciplines and constraints I think that fits the process.

BG James E. Rogers

I want to piggy back on that point. We're doing a lot of the transaction stuff also and we're finding some success. It is very clear when you go after this, if you are not aggressive and your people are not making it a part of their life, it isn't going to happen. Lean Six Sigma is simply continuous improvement. We have heard it called other names and we've done it in the past (TQM), it is just packaged differently. It gives you a little more control at the end and that is why I like it so much. It also gives you the data you need to be able to adjust later because data is captured so you can go back to

see what decisions were made during the study. You can go back and look at the analysis to know where you went and why. What I have found, especially in government, is that you get a lot of buy-in at the top, but resistance in middle management. If top leadership doesn't literally force the next layer to be adamant about doing it (don't give them an option), then it fails there. I'm also finding the younger guys/newer people coming in who don't know the business, love analytical tools and it makes sense to them. Across the board from Lean to Six Sigma it is that middle layer, the emotional layer that resists change the most. Intellectually LSS sounds logical, but emotionally these people have been doing their business for so long that way that they think it is the right way, whether it is or not. And that is where we are having a hard time breaking through.

Mr. Mark DeYoung

I think you're right on, at Radford we went to Kodak Chemical and hired a guy named Jessie who's only job at Radford is PS. He's the champion, he's the owner, he's got accountabilities, deliverables we had to go outside to get him, because we could not find it in the culture at Radford so we went to Kodak and hired a Lean Six Sigma, now a quote "ATK PES" and installed him in the facility, it is a cultural shift.

Dr. Dean L. Bartles

Ok, Bob do you have anything?

Mr. Robert R. Harris

We don't have a Lean or a Six Sigma program, we have a SMART program. SMART is in our organization, because we don't want all of the flavors of the month that have come and gone about improvements, what we have developed is something called Sensible Manufacturing and Research Techniques. Included in the SMART program are techniques like Six Sigma, Lean, even the ManTech program. It is all those things directed at improving and focuses on where the right tool can be used in the right place. We try to get away from flavor of month so when a new program comes along, whatever you want to call it, it can be included in our SMART program, because it will be another tool. Every December we have something we call a SMART summit, where we get the team leaders from each of the locations together and sit & talk about the significant improvements or significant changes that they have made and what they accomplished.

Dr. Dean L. Bartles

Joel

Mr. Joel E. Gregory

In understand the Superbowl party at my house was very successful, in my absence.

Slide #2

We've been in the Lean Six Sigma business for an extended amount of time. In 2000 we signed a contract with the largest Lean consulting organization in the country. They came in and lived with us for a year and put engineers on every production line. Basically they gained all the profits from improved efficiencies the 1<sup>st</sup> year, every penny we were able to identify that was saved as a result of their analysis, they got. The fact of the matter is we got a couple of things out of it, we got reconfigured production processes, and we also got, much more importantly, the Lean culture. We trained all of our engineers, all of our managers in Lean techniques and ingrained them into the way we do business. This has been a program that has gained momentum over the years; it is an exceptionally

good program. Six Sigma stuff came in a couple of years later, we initially sent off about a dozen people to a training course for about a month, we then brought in consultants, presented classes. Everyone in the management structure has been through a Six Sigma course. They are not all qualified as Green Belts but they have been trained in the procedures and techniques. It has been an ongoing process for an extended period of time. Bottom line, comment was made about Quality circles, TQM and I've always been a bit of a skeptic because I was never able to identify anything that came out of the bottom line of those programs that saved money, as a matter of fact, quite to the contrary, my experience, all of those programs cost us an awful lot of money for marginal results. By contrast, the Six Sigma the Lean techniques we are using now, what I really like about them is, I can see a real bottom line savings, hard dollars that I can identify I can look at the process, I can look at the actual numbers before and after, and I know I'm saving money. I am an enormous advocate for the whole program.

#### Slide #3

We try to listen to our customers, be it an internal customer or an external customer in selecting our projects. It is really predicated on two approaches, where can we save the most money and if we have a process that is causing someone else a problem or causing ourselves our problem. We try to identify those and focus in on them. We've had projects across the spectrum, we've done a lot of manufacturing projects, and we also conducted projects in all of our administrative support departments. We are actually rolling out about the 3<sup>rd</sup> revolution of the admin support projects. The dollar savings are a little more difficult to identify. Certainly you can identify the increases and the efficiencies.

#### Slide #4

These are some of the gee whiz numbers that go with our program. These are typical results we've been seeing. The reduced cycle time is the one that I believe is the most significant.

#### Slide #5

These are some of types of projects we've had. We've tried to involve our customers in all of our projects, both our government customers and our commercial customers, and our subcontractors. We've also had a number of projects where we've asked folks to provide input to us, to come in and participate with us in trying to figure out ways to improve the quality of products they receive, and to make their products more useful in our production lines. If there are tolerance levels than can make it easier for us to produce stuff, we try to get them involved in process of identifying those parameters and get them involved in the solutions. The top ones for example are joint projects with the government, where we'd had government engineers involved in the projects. The 2<sup>nd</sup> category, are examples of things we've identified in the manufacturing project that we feel have a potential for savings. The bottom part is some of the projects we've done in the administrative support areas. For example, in the contract review process improvement, we looked at how long it took us to take requirement we've received and turn it into a proposal and turn that proposal into a contract. This was one of our biggest successes. We've driven the time down by over 75% using a strictly structured approach and putting some metrics in it and identifying where the stop gaps are, and who were the blockages in the system, what were the procedural blockages in the system.

#### BG James E. Rogers

We are having some challenges with GOCO staffs working with the contractor. We're spinning right now to figure out the best way. I'm pushing GOCO staffs to become more efficient, to value stream

map their processes, and to set improvement goals. OK, now I want to team with my contractors to facilitate some of the things. The challenge is getting with the PCO's and lawyers to work through all their concerns. For instance, we can not work on projects that only have benefit for the contractor. We are working through these restrictions right now.

Mr. Joel E. Gregory

Slide #6

These are examples of some of the projects we've had, and a few of the statistics that came out of the projects.

Mr. Mark DeYoung

I think we've had some great success stories on modernization we've had some disappointments on modernization both on the execution and the outcome in ATK. Six Sigma seems like an area where clearly where modernization IPTs should be using that tool to create the metrics, the thru puts, the accountabilities, the outcomes of the disciplines we are going to use. I think the Radford where we stubbed our toe and struggled and feel like I am being drug behind a team of horses, modernization initiatives on getting stuff done at Radford so I think we've underutilized, maybe this IPT team approach between government and industry on Six Sigma driving into the modernization program as the base, is an incredible initiative and I wonder if we have underutilized that in the IPT. We need to go back and check on that.

Mr. Joel E. Gregory

We see the defect rate reduced 27%, which pushed our defect rate out to the 3<sup>rd</sup> and 4<sup>th</sup> decimal point in these processes. It was a significant program for us.

Mr. Rene Kiebler

I was involved in that project and I want to make sure everyone understands that when he says it was a joint team, engineers working side by side and it is one of the few cases that I've seen where Industry & government folks worked so well together. The result was exceptional and I wanted to make sure everyone had a chance to hear that. Everyone on our side remembers that we worked well together and got a significant result from it. I say that not for just your benefit but for everyone's benefit because sometime the government folks, feel like contractors are really not interested in executing the Six Sigma process. And when we get involved with them there appears to be resistance to working side by side and the discussions we have, maybe they really don't want us to know the reject rates are, maybe they really don't want us to know the kind of savings we're getting from executing these projects. What I would say is, a lot of savings that we got out of this we reinvested in production line and upgrading of other equipment through process. The 2<sup>nd</sup> part of that project was representative of a substantial government investment was paid for, in large part, by the savings from the initial efforts. So it was not like the government is looking to get back dollars. We worked together with AO to make sure it was a win-win.

Mr. Joel E. Gregory

I can go one step further. We have been really impressed with the folks from ARDEC that participated in our Six Sigma program. They really rolled up their shirt sleeves and worked with our guys and brought a great deal to the projects. They were truly joint projects from start to finish. Very successful

Slide #7

To switch tracks, these slides are examples of automation. The first deals with the 120mm tank LAP line. We made some investments in automation which resulted in significantly reduced defects rates. We are talking very small very reject rates to start with; we already have a 1<sup>st</sup> pass acceptance rate of 99.9%, so you are on the fringes here. However, if you do introduce a defect, it causes enormous amounts of problems. If you are able to automate your inspection systems to preclude the possibility of a defect, that is significant to us.

Slide #8

This is another example. Once again we put in auto gauging and automatic inspection systems, and were able to solve a problem on one hand and improve thru put activity on the other hand.

Slide #9

This is an example of a 67% reduction in defects. I am still looking for the other 34%. This was a program that's looking at defects we had in both the painting system and erosion. This was one example where the problem was not significant to start with in the terms of the defects but as a result of this project, the investment paid for itself in 3 months. It was an investment that amortized itself almost immediately.

Slide #10

This is the last chart, a little bit of apple pie and mother hood.

Dr. Dean L. Bartles

Did you get any examples from anyone else in your sector?

Mr. Joel E. Gregory

No. I did not receive any responses to my request.

Dr. Dean L. Bartles

Jerry

Mr. Jerry Hammonds

I have 1 slide. Unlike other members of the sectors, I did get some feedback. Some of the companies I contacted said they felt that Lean and Six Sigma were just buzz words and that they were not interested in doing anything. Some companies are still in the very infancy stage of developing their Six Sigma programs. But there are a couple of examples such as ATK who are very much involved, and BAE Systems which is some where between infant and the material level but headed in the right direction. For example, ATK Nitrocellulose Production, I thought did a phenomenal job (PES sheet on this) trying to increase demand on nitrocellulose production capabilities. They were looking for a 22% increase in capacity. They also had some delivery issues as well. They followed the principles of Lean Six Sigma and were able to achieve a 37% overall through-put increase, greater than 98% on time deliveries. They bumped up their deliveries performance from 90% to over 98%. In doing so, they were able to avoid what they anticipated were significant million dollar investments that would have had to be made to deal with these issues had they not been able to apply Lean Six Sigma. Mark's folks did a phenomenal job.

Mr. Mark DeYoung

Interesting thing about this project, and I walked through this project with the team. This was the 1<sup>st</sup> project our Kodak executive took on, we thought we were going to invest \$2M and the results were incredible simplistic to implement and the outcomes were really measurable and very positive. If you go to that factory today, what we did was basically set up a visual factory. You can go into that factory today and there are white boards in all the operations. You can see the bottle necks immediately, all the wage roll people can see the bottlenecks, all the employees can see the throughput, and it is red, yellow, green, card coded. It was an amazingly simple fix to a complex problem, worked very well.

#### Mr. Jerry Hammonds

I think that is one thing you will find if you follow this approach. A lot of the needs and modification changes are pretty simple, and should be self evident, or maybe you just overlooked, or you would have overlooked if you had not applied this process. I think that in it speaks to why you should be using Lean Six Sigma and I'm going to have some conversations with those companies to see if we can't change their mindset with regard to Lean and Six Sigma being buzz words.

At OSI, these are just 4 examples of bottom line success stories, including reduction in coal consumption. Again, fairly simple on how we dealt with some things, including rationalization of the infrastructure, removal of some steam lines, better managing process time so you don't have peak loads on the boiler systems. If you can better manage your production schedule and bring things on line in an organized fashion, reduce peak loading on your boiler system, \$370K/year of savings were achieved. I want you to also notice that you can apply Lean Six Sigma to a variety of different things. In this case, it was in the utilities area. We have in the operations area, acetic acid losses in waste water were considered excessive and just by implementing some simple changes and better process control it allowed us to reduce the amount of acid that was being lost in our waste water stream.

The last one is a fairly interesting one, Improved Inventory Management/Reduction. This involved not just explosives inventories but also inventories of chemicals in the utilities area, coal and this sort of thing. Changes in our stores infrastructure practices and partnering with some of our suppliers, we have now better accounting and distribution in our stores. Our vendors actually come in and keep our shelves stocked for us and we don't have to carry a lot of excess inventory. We had a supplier conference dinner recently to recognize supplier companies where it has really paid off partnering with some of the suppliers.

A couple of examples I did not put on the sheet but I feel warrants recognition. Working closely with the government staff at Holston, we were able to achieve ISO 14001 3<sup>rd</sup> party registration recently. I think that is a remarkable achievement. The 2<sup>nd</sup> one is one that we are working on right now. Wednesday of this week we will be hosting a meeting at Holston, working with ARDEC, some of the AO folks will be there and we will be looking at C4 production to try to eliminate some variability in that particular product. So I see this as a good effort from 2 companies working with ARDEC to achieve what is the goal and that is reduce variability in that product.

#### Dr. Dean L. Bartles

Jerry thanks. Just curious from the US Government Representatives, is this the kind of information you are looking for, would you like to get more of this at each ICAP meeting, would you like to hear from the sectors that are not here today? Any feedback you want to give?

Mr. Matthew T. Zimmerman

I think some of lessons learned from things that did not work out like you envisioned might be helpful.

Mr. Jyuji Hewitt

I would submit that as General Griffin goes out and visits a lot of our plants and depots, he's got an eye out for Lean Six Sigma, and for you to show him what you are doing on your side, shows him that we as an over industrial base is getting it. I think it will send the right message to him that we as an ammunition industrial base are following Lean Six Sigma techniques.

Dr. Dean L. Bartles

I will follow with other sector leads that were not here and the sector leads that are here, if you wouldn't mind putting a little more muscle on some of these other companies in your sectors to give us some examples. I like Mark's format on how he presented the ATK examples.

Ms. Patricia Huber

Joint Munitions Command

This is my 2<sup>nd</sup> ICAP, I thought the format that this was an exchange where each of the sectors got together and said here's what is not working well, here's what is working well. I didn't necessarily see that exchange the last time and I don't know the purpose of the ICAP.

Dr. Dean L. Bartles

If we could defer that question to right after break, the last item on the agenda is an open discussion on ideas for ICAP initiatives in 2000. That is my way of saying what you just said, I think it would be worthwhile for all of us to have an open discussion on exactly that, I want to make sure we have not lost track of what ICAP is really here for. What are things that the government side would like to see more out of industry?

BG James E. Rogers

One thing on the government side of Lean Six Sigma, for all points to ponder: there is a huge learning curve in this whole process, whether you call it Lean Six Sigma or you call it continuous improvement. Some things that we are garnering are lessons learned. It is kind of like the 1<sup>st</sup> ICAP I attended where we were talking about moving facilities and how Mark came across and said this is how we move facilities and ,oh by the way, these are the lessons we learned. This was a real eye opener to me. That is the kind of information sharing that benefits all of us. We discovered in our depots, which had been doing lean for a number of years, just adding Six Sigma complimented the CI process.

One of the challenges we had was identifying projects and then prioritizing the projects. Many of the supervisors had great inklings of what they thought were the right projects to do, but we found that Value Stream mapping our processes lead us to high impact projects. Whether it is on the production line or a transactional white collar process, doing value stream maps usually pays huge dividends.

We found a lot of the middle management folks and some of the senior folks thought Lean Six Sigma, was like you said, the buzz word of the day, but once they Value Stream Mapped their processes, they were amazed at the number of things being done by multiple people. And it did not need to be up here, but could probably be done in lower areas of the business.

We value stream mapped everything and what came out of that was a huge number of charters/projects/ just do its. I'll give you an example, we just had one on a training plan and they

are not done with their green belt yet, but they had 15 improvements to the process by just doing it. One was having a single person input training info instead of four.

G-1 allowed them to have access to the training program so they could get training rosters AND, they can put the students' names into TED. Not having the G-1 do it took burden off of G-1 as well. They improved 15 things even before the green belt came up with solutions that for long-term fixes. We did not discover these opportunities until we value stream mapped the process. We then received immediate benefit by completing them as they came up versus waiting until the GB project was complete. That opened the eyes of a lot of our middle-level folks because we did it in the VSM groups that laid this thing all out and saw where we needed to fix things. If you can fix something right away, go ahead and fix it. We are seeing real program benefits from simply questioning why we are doing something or the way we are doing it. We have several charters in our hopper and we are making sure we prioritize them.

The other challenge we have is with time management. We have a lot of folks saying, "I'm a green belt; I'm a project sponsor; you name it, and by the way, I have a day job". The challenge is, we are working to make sure that everyone understands the priority of work they are doing and what they are doing facilitates the bigger organization. They are taking time out of what their normal mission functions, but in the long run it is going to help them because it will streamline the process and make their job a little more efficient.

As a part of that, they are scared that they will lose people by becoming more efficient. The answer is that they will lose people and I am very straight forward with that. If we are doing a process that takes four people and we can do it with three, then let's do it with three. I tell them the most resistant people are the guys who aren't doing too much and they want to stay that way. There is a whole bunch of people that are overworked and they would love to see this process reviewed because they want to get it more efficient. They want to spread their workload so they can go home at night.

The challenge is to get the buy in to say it is okay to go to three because the fourth person is not needed and we can use them in other areas where we need people. There may come a time in the future where we may be able to slim down on people. Right now we have a list of things that we are not doing because we don't have enough people. So why don't we get after those to solve the bigger picture piece?

We are being a little Draconian and I would argue, if it were soldiers, it would be easier to be draconian than with civilians. But it really is. With contractors, you all have an easier way to get at savings in that respect than we do, because you can just say, you're going to move over here and facilitate that; I assume, I'm guessing. We have a challenge here, but we are working through it.

## **OPEN DISCUSSION ON IDEAS FOR ICAP INITIATIVES IN 2007**

### Dr. Dean L. Bartles

I think Trish's question set the stage for what we want to talk about the next 30 or 45 minutes. I phrase this as open discussion on ideas for ICAP initiatives in 2007. Specifically Trish mentioned, what kinds of things are industry struggling with that this would be a good forum to come and discuss. Things that aren't company specific but things that would apply to all companies in all of the sectors and how we may be able to work those issues as a team between government and industry going forward which are the kind of things that ICAP has been successful at doing and this a great forum for that and shame on us for not taking advantage of that. So with that introduction, I open the floor

for anyone that has any ideas from either government or industry about things we might address as an initiative or initiatives in 2007 for the ICAP.

Ms. Patricia L. Felth

How do the sector representatives actually represent the members of their sector? The study that I just talked about, we are going to try and identify, who are the supplier base for all ammunition. Which organizations comprise the supplier base for all the ammunition we buy?

I think the sector leads need to maintain some kind of charts or something, who are the members of my sector. When I talk Pyrotechnics, who are the members of the pyrotechnics suppliers?

Dr. Dean L. Bartles

I believe we have that Patti and I think that is updated periodically, I know that Amy emails out to the sector leads every quarter. Getting ready for the ICAP meeting, here are the listings of all the companies in your sector, any changes, and any deletions and then she puts all that together and distributes that.

Ms. Patricia L. Felth

Where does Amy get the list from? We're awarding new contracts every year so members may be entering this market space.

Mr. Robert R. Harris

For the Ammo summit, there are slides that we are all going to have. We have on there company's in the sector and you will be able to see it.

Dr. Dean L. Bartles

It is posted on the website. Amy do you only distribute that to the Sector industry side? Yes. Let's distribute that to government side and if you guys see that we are missing some, please let us know.

Mr. Mark DeYoung

The whole supply chain is not represented by sectors or sector leads either. For example, you will see a company, so you will say where is ABC Company, ABC Company is a tier company to of one of the represented companies. Matt went through an issue a couple of years ago looking at single point failures in the supply chain in ammo. We came up with hundreds of suppliers and dozens of single point failures. That data was all catalogued somewhere I think we have that, so it may have aged a little bit Patti, so you could have some subs that have changed but it is not a whole new world from where we did that study.

Mr. Matthew T. Zimmerman

It's been ongoing for about 3 years now. It is categorized and Steve's group now has it and it's over 300 single point failures based on the technology for each item down through the sub-tier supplies. So that is information we've got to feed you for your study.

Mr. Robert R. Harris

The companies within each sector, are they suppose to be NDIA members or just people in the sector? For clarification because, Patti you gave me a couple of names some time ago, which will be on that chart tomorrow but I don't see them on any NDIA chart. I'm not sure if they are NDIA members. So

by definition, I'm curious, are the people that are those charts, do they have to be an NDIA member to be in the sector?

Mr. Joseph Homko  
B-T Fuze Products

No

Ms. Patricia L. Felth  
I was just using pyrotechnics as an example.

Mr. Robert R. Harris  
You gave me a list of those people sometime ago that are in the Pyrotechnics Sector that you know about, which was good.

Ms. Patricia L. Felth  
There are sub-tier suppliers that are important to certain sectors.

Mr. Mark DeYoung  
There are hundreds of suppliers in small/medium cal and then you have a 2<sup>nd</sup> source program under GD-OTS with other suppliers in foreign nations doing the 2<sup>nd</sup> source, what we have tried to capture in Small/Medium Cal, you have 7 key sector companies, and if you plow down from there you have the whole supply team. We rolled them up to 7 because that is a manageable number. It is the responsibility of the sector lead to make us aware of anything going on with their sub-tier suppliers.

Ms. Patricia L. Felth  
When you do your survey of sector you are rolling up to the top what are the key issues.

Mr. Mark DeYoung  
Survey sector, go to the top 7 sectors submit what is going on in your sector, which includes their supply chain, boil it all down and say here's the issues and that is how we present it.

COL Ole A. Knudson  
PM, Combat Ammunition Systems, Picatinny Arsenal

Is that part of sector updates?

Mr. Mark DeYoung  
We didn't do general sector updates, we did Six Sigma updates. It depends on what we are asked to bring the ICAP meetings.

COL Ole A. Knudson  
If ICAP is to addresses industry issues, wouldn't it be the standard format always is to ask for sector issues?

Mr. Robert R. Harris

General rule is when the request comes around for an agenda, if there are significant issues in that areas, then we are suppose to provide that to the Chairman. What we get are personal request from sector members, when you get into it, they sit & talk & it never goes anywhere. So you have to try to pick out what are the real issues in the sector. We bring that to the table if there is a specific item.

COL Ole A. Knudson

Question is, in some point in time, apathy, the sector rep, we didn't do anything so they just stopped talking about it anymore.

Mr. Mark DeYoung

I think there is apathy in ICAP, when I call for Six Sigma charts and I don't get any. Why do you think I don't get any, they probably think things are not going to change. I think a couple of years ago the ICAP was much more effective than it is in 2007. I think the dialogue was more open, some would say more, hostile, I happen to find that to be honest and refreshing. I think we have a very politically correct ICAP today.

BG James E. Rogers

Why is that? What changed that?

Mr. Mark DeYoung

I think a lot it came with the critical defect clause, I think a lot of people got offended, others felt like there was discussion about them whether they were an industry or just wasn't worth the risk. If you think about the dynamics in the room, you are our customer, we don't want to come in here complaining, but at the same time we want to come in here to raise issues we disagree with you maybe. I think some people surrendered and said it was not worth it.

BG James E. Rogers

I agree, if you can't have an open dialogue and discuss whether we agree or disagree, then we are in the wrong forum, which is whole purpose of this I thought.

Mr. Robert R. Harris

I have been on the ICAP almost 8 years. I think we had a different set of characters in the ICAP historically. We had some contentious meetings. There were some good results that came out of the ICAP; the Readiness Rating System for ammunition was a result ICAP discussed. We talked about Pyrotechnics, there were RFP's for flares that were being put out for bid that had too m any suppliers and created an issue because the market and the resultant way that companies people had to bid did not allow the reinvestments back into the industry. The lack of safety investment had to contribute to 6 fatalities over five years. Those were some tough issues, but we took them on and there was some very contentious dialogue in some of the meetings where people were willing to put those in front of us.

COL Ole A. Knudson

What are pretentious issues now?

Mr. Robert R. Harris

Pretentious issue to me is what is going to happen to this industry 2 years from now?

COL Ole A. Knudson

How does anyone know that? I'm not a veteran, I've sit here and listened to all the prognosticating that happened last year, I have no idea, the only thing I have any view on is mortar and artillery ammunition. I look at that and say, unless we down size the Army dramatically, most of that is going into training ammunition.

Mr. Robert R. Harris

That is why this issue is contentious, because we don't agree. We need to talk about things like that, that is why I am calling it contentious.

COL Ole A. Knudson

How will any know?

Mr. Robert R. Harris

You will start seeing the budgets being affected.

COL Ole A. Knudson

Even if that happens, what will anyone be able to do about it when the budgets start going down.

Mr. Mark DeYoung

The point is you don't wait until then to do anything about it.

COL Ole A. Knudson

What will you do it about it now?

Mr. Robert R. Harris

I think we can start the awareness program that it could happen. This industry went through turmoil between 1985 and 1994, you've all seen the numbers and you're going to start seeing it happening again.

COL Ole A. Knudson

I know where ammo budget was a couple of years, I was in the pentagon.

Mr. Robert R. Harris

You'll see signs of that happening, and nobody has stood up and said that is going to be a problem if we don't do it now if we don't start raising the flag now, saying something has to be done.

COL Ole A. Knudson

What are we saying has to be done ammo, are we saying we are going to somehow buy more ammunition than is needed for ever? I just don't know something has to be done, what are those options?

Dr. Dean L. Bartles

Is it possible for industry to get better insight into further out year planning numbers to have a better planning perspective?

COL Ole A. Knudson

I think you have better visibility with our POM -we go through whole process to make the POM, if you have ever been part of that process, you know that I we're trying to do is do our best guess at what it

might be based on what it is today and what the OSD defense planning guide, there isn't a crystal ball other than the palm. And the palm numbers, ammo looks pretty solid still.

Mr. Robert R. Harris

Mark & GD & myself and others have tried to figure out what can we do, what makes sense, how do we protect the Ammunition Industrial Base for the future? Back in 1994, the base itself was going to disappear. Preventing 75% of the companies from disappearing again is what we are concerned about and that is what we have to guard against. I don't know the answers and it is too far ahead of the curve to say what the solutions are, but unless we start talking about it now, talk about the strategy we want to look at and deal with, I don't think we're going to get anything but slapped in the face when it hits us.

COL Ole A. Knudson

I can't disagree with any of that, I just don't have any real ideas collective we can do about them.

Mr. Robert R. Harris

Look at the ICAP - you look at the type of people that are here, not any one of them is going to have the right answers. By putting something like this on the table, we are collectively making sure the industrial base survives. Then this is the right body to discuss those things. If we don't do this, I'm concerned that it is going to come upon us so fast, suddenly we are all going to start going in all directions. The solutions can come in many different forms. For example, there have been discussions about starting an Ammunition caucus in Congress able to support keeping the viable ammunition bases in place.

COL Ole A. Knudson

Those are the kind of things that should be on the agenda.

Mr. Robert R. Harris

We can put these kinds of items on the agenda. Sometimes it is contentious because everyone will not agree, but we will talk through it and in a room like this we will get one or two good ideas and might end up finding the solution that will be worth all the effort.

Mr. Mark DeYoung

That is right, that is what we are trying to do, plus we are at a time right now where money still flowing, modernization program has support, General Griffin supports it. There is a lot of leadership involved right now in modernization, where do you put the money? How quickly is it going to be executed? There is probably the 2 heads is better than one, I think the body could address some of those things, and whether its implemented the way the body address or not, at least it creates industry government dialogue on some key topics that are important to everybody's future.

COL(R) Palaschak

The problem today is that our base's capabilities are not the size they were before the last downturn in funding. As a result the base is particularly fragile, especially at the sub-tier levels. Definition of a single point failure: Those are the kind of assets out there that we need to look at and say: If I lose that capability, is that a "so what" or is that something really critical that I have to examine closer. If you then say, I want to keep that capability, then you have 2 choices, 1) you pay to keep it inactive or 2) you pay to have production. If not, it is going to go away. It is that simple. That is the reason you

don't have 25 fuze manufacturers today. Point is, unless you start looking ahead and examining these issues now while times are relatively good (2008 is better than predicted a year ago), you will still have that problem at some point down the road, and rather than wait until you have somebody's knife in your back, you should examine and discuss it now.

Mr. Robert R. Harris

The conversation we are getting into concerning industrial base and the downturn, is really addressing how we are functioning as the ICAP. It is very healthy if we have dialogue.

COL Ole A. Knudson

Set up forum like it used to be or different?

Mr. Robert R. Harris

What do you think leader?

Dr. Dean L. Bartles

If I ask everybody on the ICAP, give me topics you'd like to discuss at the ICAP, early, like a couple of months early, and I'll publish those out to everybody and say, here is what industry wants to talk about, so the government can prepare and here's what the government wants to talk about so the industry can prepare. There should not be anything that anyone of us should be afraid to put on that agenda.

COL Ole A. Knudson

Apathy part, like you said before, it did not produce anything.

Mr. Robert R. Harris

Personally I would not use the word Apathy. The industry is not whining about things because a lot of things are going well. So we don't want to whine. I think the industry business has been going great.

COL Ole A. Knudson

There is more conversation rather than dialogue between industry and government and I think a lot has to do when PEO ammo stood up, there were a lot of linkages established. Industrial base was involved in developing this strategic plan. It was invited to participate in the industrial base IPT. I hear feedback from the members of the MIPTF, including some around here about the dialogue with PM's. There are a lot of issues being solved down at the conversation level, the individual level.

Mr. Robert R. Harris

We have to get them out so we can talk about them.

Dr. Dean L. Bartles

Soft landing issue I think is one that a lot people talk about and a lot of people are concerned about, just as you just witnessed, it is hard to put your hand on a specific issue, what can we do about it. Give me a specific issue or a specific task. I'll put it on the agenda and we'll talk about it. It is more than let's talk about the Soft Landing problem. We have to have something tangible we can attack. What is it? I'm open to ideas on how to attack that issue. Because it is something that everyone is concerned about but no one knows how to get at. We don't have to have an answer today, if anyone comes up with

an idea, and if you don't want to say it right now, I'll keep you anonymous, give it to me and I'll put it out to everyone. Here is a suggestion on how we can attack this problem.

Mr. Robert R. Harris

I made a suggestion last time, we historically on the ICAP, have set up separate subcommittees to watch or monitor and provide feedback to ICAP. I think this problem is big enough and serious enough that there should be people assigned to a subcommittee that can develop strategies and ideas and report back to the ICAP. I made that recommendation last and I'll make it again; I think it is worth doing.

Mr. Timothy J. Bagniefski

NDIA (GD-OTS)

You get more org discussion in that manner, meaningful dialogue rather than free for all in here for days on end.

Mr. Steven Rosenberg

PM-JS

One of things we kicked around in the industrial base, we really don't know what is the minimal sustaining rate, what is the break even point for your industries where I'm not producing 4,000 units a month or 2,000 units a day, it's going away because it is no longer economical to produce. That will go a long way to establishing a floor in discussions with PM's excreta, they can at least put it on the table, no funding here but industry says anything less than this, it is going away, and then the argument is made to the power to be, they are at least aware that if they don't fund at those levels, as identified by your constituents, the Army is then, the DOD is then taking over.

Mr. Mark DeYoung

That is a valid idea.

COL Ole A. Knudson

That goes back to your point earlier Mark, you asked, what is the point of the study. Isn't that the point of the study?

Mr. Mark DeYoung

Small & medium cal, I think we largely did just that. I thought everyone did that because Small & Medium Cal did it, but apparently not.

Mr. Steven Rosenberg

Absolute not to speak for the acquisition side of the PEO but it would seem to that having that info, knowing that here's my down ramp, and 3 years from now I'm going to hit that. I'd rather have that in my planning to help level things out to help avoid hitting. It helps put on table.

COL Ole A. Knudson

Very important thing for GA in the planning thing to know that but it has to be credible. I've seen these in the past where people have desires that aren't really the minimum. And then it all starts falling apart. We have to use some sanity on what is the minimum.

Mr. Matthew T. Zimmerman

We don't have single definition of minimum.

Dr. Dean L. Bartles

We're talking about an industry government IPT to discuss strategy for the impending soft landing. Is that what I hear?

COL Ole A. Knudson

I think you should term it as to determine the true minimal sustaining levels for the industrial base and sectors. Don't even say about soft landing stuff. Is not the point you were saying you can't go below?

Mr. Mark DeYoung

I think that is part of it but the other part we don't see, talk about seeing the Palm, seeing the plan forecast, we don't really see the palm but we see forecast we see what comes out of the budget. We don't see inventory, we don't see consumption rates for our products, we see through the glass pretty darkly because requirements is only a piece of it. We don't get to see the inventory build, we don't get to see the other pieces which we know are going to impact the ability to manage the business in terms of not just protecting revenue but really protecting skill retention, utilization of assets, where industry should be investing. It is difficult to forward and invest a lot of money if you can't tell them that you also know what the future requirements are, you believe you can, and inventory balances and everything for 3, 4, 5 years, how are you going to get that kind of money?

COL Ole A. Knudson

Couple things there, maybe the ICAP collectively could address. We have these for official use only stuff. I don't know if that is all our stock pile reports are in the Palm. Is this an official forum, the information we give out in this forum official use, I don't know the answer to that. It sounds like we are playing official use with the industrial base which we are saying is critical to sustaining ammunition and you are saying it is critical for you to be able to help do that. I don't know how we can queue that out but I'm sure there is a way to get certain amount of that out.

COL(R) Palaschak

Official use only, I get frequently from different services, which is available to industry. The inventories, we used to get and then at one point or another, the rollups got classified and we no longer have access.

COL Ole A. Knudson

The Stock report that just came out says for official use only. It is not classified confidential or anything.

Dr. Dean L. Bartles

What ever we are going to call I will work on the wording, but there is a consensus that we should form an sub-committee. Mr. Harris has volunteered to chair that from the Industry side, and Gen BG Rogers said he will come up with a name from the Government side. Rich I think it would be great if you would be involved in that also. Bob will pick a couple of other people and try to keep this small.

COL Ole A. Knudson

My question goes back to Mark's question earlier, isn't that tied directly to what Patti is talking about? So isn't that group automatically part of that?

Mr. Mark DeYoung

I guess the question is, do we need to peak behind curtain of what Patti is doing or is the curtain going to be opened up and industry participate? If that is the case, do you need a separate committee on the ICAP or do you just need participation on the team Patti is talking about? I don't know what the government's position is on their studies. I don't know what you need.

BG James E. Rogers

I'm open, to it. I think it is more powerful when you have government and industry working together toward a solution. That piece is clear. There will also be pieces that are government specific and there will be pieces that each industry/company doesn't want to share with other companies. That is very possible and that is what we will have to work through. We want to respect each company's right to privacy, but we need the information to do a credible study. Those two pieces need to come together somehow and we'll work through that. I don't know the right answer, but I'm pretty sure we can share most of that stuff, the majority. I will make sure that most of it is available and we can get it out, especially our consumption data. When it gets down to specifics, we know where it is, what it's specifically being consumed for, sometimes down to the unit, but some of the specific stuff is classified.

Mr. Mark DeYoung

Other thing is we are big boys & girls and we need to have thick enough skin to interact on areas we disagree with. I want to go back to the critical defect clause, people's patriotism is questioned, and their focus on quality is questioned. How can you disagree with this, what are you trying to hide, all that was very concerning to the industry? If you disagree with the Critical defect Clause, they you are not quality conscience as a contractor. You felt it was ok to have critical defects. It came across in a very difficult way; people in personally in industry were offended. Somehow their integrity was called into question because they did not approve the wording of a clause that was focused on critical defects therefore they did not care about quality therefore they were not a patriot. We have to work through those issues without becoming offended.

BG James E. Rogers

I think you said it best, in that we need to work thru those issues. To question someone's loyalty to the country doesn't help anybody.

Mr. Mark DeYoung

That was implied. People who chose to be offended, were offended.

BG James E. Rogers

Quest for quality is paramount here just like safety. The issue is how it is perceived.

Mr. Steve Mapley

US Army Joint Munitions Command

I think one thing ICAP is a valuable tool, while Patti doing her study, it is hard for her to go and pick 4 or 5 companies from the industry to be part of the study. She can come to the ICAP where she has industry representatives.

Dr. Dean L. Bartles

Any other issues anyone wants to bring up today we can talk about or at least talk about putting on the agenda for a future meeting for 2007 initiatives.

Ms. Patricia Huber

I have one to add that is very interesting to me and I thought the senior folks could address. Lean Six Sigma project, General Rogers brought it up, that we are sorting thru just how far can go with partnership but that is the key word, partnership. There used to be a partnering arrangement that brought us much closer to be able to work a lot of issues together.

BG William R. Holmes, USA (Ret)

I think over last few years, the idea of partnering 5 years ago has seriously deteriorated. Is the government serious about partnering, what does that exactly mean, what are the expectations in establishing this? Does there need to be a way to go about a specific program or some other way to establish a partnering relationship? I think that is an excellent topic.

COL Ole A. Knudson

I'd really like to understand more. Does partnering mean working on a specific project, trying to get better, getting best value of it or does partnering mean that it is almost a kin to communism profit? There are people that have different perspectives. Partnering to me means that we are going to work on the project at hand and do the best job for the tax payers with a reasonable expectation take care of the company and the government is going to be involved.

Ms. Patricia L. Felth

I'm puzzled too; in what way partnering has deteriorated. We are staffing and proactively pushing our team out to work with the contractors and all this takes a little effort on the government side. Budget money to do improvements.

Mr. Robert R. Harris

What I've found, partnering is eye of beholder. It is also relative to personnel. If you believe in partnering, you have people that want to work together. In some places there are great relationships you don't have to have formal partnering because you have the relationships where people can work together where you need partnering is where people can't work together.

COL Ole A. Knudson

You have automatic partnering in the Max program. I think it has brought a lot of value to government.

Mr. Robert R. Harris

That program was very good.

COL Ole A. Knudson

If Jim perceived that he was being taking to cleaners by the industry guys, that partnering would stop.

Mr. Robert R. Harris

It goes back to my point, it is personality driven by the people who are involved and the Max program was one of the best examples of how well that worked.

COL Ole A. Knudson

If the Industry guys and the approach that they took to that are bring value and not just profit, that is why it is working.

Going back to earlier, is there going to be a task at the next ICAP to report out on what ever this subcommittee is that is working with Patti on the tentative level of minimum sustaining levels by sector, by type product. I don't think you can do it by company. Is it down at detonators, or is it at...?

COL(R) Palaschak

It is not a universal template; for example if you go to Medico Industries, you could produce 60mm or 81 mm mortar bodies at some level and various combinations and that company can survive. Can every facility involved in the manufacture of 60mm and 81mm mortar ammo survive at that same rate? You have to walk through the system, and see where the maximum MSR is for all of that supply chain; then you have a number everyone in the supply chain can work with.

Mr. Joel E. Gregory

That is only half the equation, when you start talking about minimum, it is minimum at what cost? That is the other half of the equation, that's the part you cannot get your arms around.

COL Ole A. Knudson

When you are trying to find the minimum sustaining level or the economic, I never could figure out that.

COL(R) Palaschak

In general, a 1-8-5 is considered an economic rate. Trying to define a minimum sustaining rate (MSR) is a challenge. I go over to the Congress every year and advocate some minimum rate of production to fix a problem in the base. I get a minimum rate from the companies involved in a particular product; I look at the P forms and there are different numbers on the P Forms. We need agreement between producers and customers on MSR's for their products.

COL Ole A. Knudson

Are you already doing this as an official submission?

COL(R) Palaschak

No, I do this every year to find out where the production problems are in the base and try to convince Congress to fix those particular problems.

Dr. Dean L. Bartles

I'm not sure we can get our arms around it today. Patti's heard all the discussion and it will be in the minutes, Bob has heard it all, why don't we have the subcommittee formed and let that group come up with these issues we are going to tackle and report out here at the ICAP.

COL Ole A. Knudson

The most important thing, if there are really minimal sustainment levels, we have to have close to what position that is so we can articulate to people. So if someone in GA asks this guy and then some else says the same thing or something close to the same thing. You are sitting there and you hear widely discriminating, and you are not the expert, you just discount it all. Cause this guy came in and said this and this other guy came in and said this, the government official guy said this and another guy in the government chain said this, I feel like I will just make it up because it is obvious that they don't know, because they are all coming in saying something different. The facts that we are going to have the ICAP do something, it sounds like something that translates into at least a communication of here is the need.

Mr. Robert R. Harris

I think what we have got to look at is a full spectrum of what our options are that are available to us. I think we are back in the game a little bit in terms of looking at strategy right now. Strategy rather than tactics of what we are going to do. We want to be careful we don't jump into tactics too quickly and go off in one direction versus another direction and by the time we get there it won't be where we want to be. Someone once told me the best strategies in the world are when we can't see the ending from the beginning. I think that is where we are right now. We need to sit down and figure out what is our real strategy and what parts we want to work on and where we want to go.

Mr. Mark DeYoung

I think we need to pull it up level above that, after 22 years in this business, how the industrial base is valued by the government. Whether it is valued or not. We have a different model of the US than the world has and I think there needs to be an understanding, what are the value points in the industrial base that the US government wants to maintain? I do not know how valuable lines are, I don't know how valuable plants are, and I don't know whether that is something we tell our international source we don't care. I don't have a clear vision of the industrial base and what is the government position is on where those assets are that they put a star on the forehead of.

Mr. Robert R. Harris

I think it is clear that you belong on committee.

Dr. Dean L. Bartles

Bob & Patti will figure who will be on this committee and Mark. I'm sure there are other issues.

Mr. James Sutton

I'm not so sure, she already has her hands full on minimum sustaining rates and everything else.

Work is being done by a consultant, needs more insight, needs more contact, needs purpose on her group, that is fine. Not saying to put Bob's issue on to that particular group's shoulders, I think they have their hands full. I do agree Bob's approach to form a separate ICAP, smaller group. Two years, got no traction what so ever on soft landing, got no where with it. Good task for this committee to take on. You'll see a list Wednesday; we have a whole list of stuff we have got going on, periodic things going on in addition that to.

Dr. Dean L. Bartles

You're suggesting you're going to name someone else from the US government to work with Bob on forming this committee?

What about CCC? The only reason I bring that up, John Maniatakis thinks it is not over; we need to get another update. Anyone else from industry or government feels that we can stick a fork in that it is done. Move forward with the clause as it is? What is the consensus?

Mr. Mark DeYoung

I've been beaten into submission. It is an initiative that my customer feels strongly about and moved off figuring how to support it.

Mr. Robert R. Harris

Patti made presentation last time, from your perspective, are we moving on?

Ms. Patricia L. Felth

I think we've agree, and I believe we are putting it in all our contracts.

Dr. Dean L. Bartles

All your contracts or was the last pitch something about we are going to try in a couple and see.

Mr. Joel E. Gregory

3 contracts

Ms. Patricia L. Felth

What else the CCC was, it doesn't assume you get 100% quality, 0 defects immediately. It builds right into it, an alternate acceptance plan where when you are working with that clause, you can submit your alternate acceptance plan right up front, for any area where you think you are going to create some defects and we agree in advance that we won't shut down.

Mr. Mark DeYoung

CPOA - Critical Plan Of Action

Dr. Dean L. Bartles

Should we get any further updates from either Industry or Government on that subject or should we drop it?

Mr. Mark DeYoung

I thought it had been cycled, I thought the Government said thank you very much. I thought the Government finalized their clause that they were going to implement it on new org contracts and they were going to work with contractors to fairly implement.

Dr. Dean L. Bartles

Is everyone happy with this?

TDP's, availability and accuracy - I think it is an Industry issue; I don't think it is a GD-OTS issue. I know from our side, we would love to have access to US Government TDP's a lot earlier than we are currently allowed to have access. I don't know how to get to that. We see on the horizon, say in the President's budget, maybe 6 or 8 months from now you guys may be coming out with a procurement and we think we never made that before maybe we can, not really sure, gee can we have a copy of the TDP's

so we can at least evaluate what we can make it and what kind of pre-planning we need to do in order to be a position to bid it.

Time to sort through TDP's with only 30 days to bid. Some of the TDP's are pretty old and some of them have a lot of inaccuracies in them. Is there a way for Industry and Government to work together to sort out all of those inaccuracies before a procurement is ever coming out?

COL Ole A. Knudson

We're taking on to do what GD-OTS Marion, they are not charging. The use Adobe acrobat to link together all the sub-files in a TDP, by this summer we will have done very similar in the format that anyone from industry don't have to buy a site license for some special software to do it, it is not really a technology stretch to use this. We will be able to put out, at least when we send out a draft RFP, a TDP with that. One of the concerns that contracting officers have about sending out TDP's that are not certified as complete to industry, that your guys go and start doing stuff on that and then we send out the real one later and we get complaints back that you sent me the other thing and I worked on this and that is not the real one.

Dr. Dean L. Bartles

I don't get that, isn't there some way for the contractor to sign an identification, that says we take that at our risk and if you change it, ok, change it.

COL Ole A. Knudson

What we are going to do, we are going to copy what GD-OTS Marion did in PDF files and send out the draft RFP.

Dr. Dean L. Bartles

To late, we want it way before the draft RFP. I'd like to look at stuff you might be buying a year from now. When you are talking about buying equipment facilitizing to get into production making something you never made before, you have a lot of advance planning. How do I do that when you send out draft RFP, you are only a couple of months away from procurement.

Ms. Patricia L. Felth

I agree with you and I lost that argument.

Dr. Dean L. Bartles

I volunteered already to take your TDP's on my nickel and clean them up for you. On several of the rounds and we couldn't do it. The PCO said no, you couldn't do that with one company. I said, make them available to everybody.

Mr. Michael Hutchison

HQ, US Army Sustainment Command

Not sure what the value would be of getting the TDPs out for review. Certainly, if we put them out for review, everybody has to get a chance to look at them. But, I suppose we can figure out a way to make them available to everybody. Let me go back and look at that. In my mind if we know a procurement is coming down the pike, we can make them available...but they have to be advertised to everyone and not just someone who asks for them.

Mr. Mark DeYoung

I want to look at everything Dean asks for.

Dr. Dean L. Bartles

The way I thought about it Mike, it's a big world out there, somebody comes in and asks you and you say no problem. And you tell Industry, all you have to do is ask for them. If we give them to 1 guy we will certainly give them to you. What is the problem with that?

Mr. Michael Hutchison

Don't work that way. We have to make them available to everyone to be fair.

Ms. Patricia L. Felth

When we issue you a tech data package it is for government purposes, so the assumption is you are going to use it to prepare for our solicitation and you are not going to use it to produce our item and sell it to someone we would sell it to. There is a little security concern, but we can get over that. The other thing is about the inaccuracy issue, we are not going to fix tech data packages with engineers sitting in cubicles whether they are yours or ours. The way to fix Tech Data Package's is through actually producing them. You need to exercise the supply chain; you need to get down to the sub-tier suppliers who will tell you that something is wrong. What we are doing on our programs, 2 months upfront added to the production lean time productability analysis for the contractors to deliver to us desired improvements, I not saying this addresses your concern about wanting it earlier but in addition to that new contracts specifically that you help us. We intend to make those changes as we go through a new production contract but we want to give you a chance.

Dr. Dean L. Bartles

Patti, you are right about engineers in cubicles that don't do production not being able to fix TDP's. But when you give them to the manufacturers who are going to send them to their sub-suppliers and ask them to quote, there is a lot of stuff that is going to come out. It happens every time. We at least could do that for you well ahead of any kind of solicitation. You are talking about 2 months; we still need more time than that.

BG James E. Rogers

We got it. Give us a due out and we'll come back to you.

Dr. Dean L. Bartles

Another one I have is PBP's (Performance Based Payments). I don't know how the rest of the industry feels but I feel that PBP's are a good thing. I've seen a letter from a pretty high senior US government person saying PBP's are our preferred method and you should work towards applying them in all of your contracts. Frankly, we agree with that. So we don't understand why you can't put PBP's in the RFQ's, and say quote based on the assumption that you are going to have PBP's. Instead of not putting them in the RFQ and then we have to make the assumption, will they get them, not sure, that affects our pricing strategy. And then if we do come in later after the fact and say, we'd like to ask for modification to the contract, here is our suggestion for PBP milestone schedule. Immediately we are going to get, how much money are going to give us back. We'd like it better when there are contracts that have the PBP schedule already in there that says, quote to this schedule. We do that on 120 tank training ammunition, we just had a recent contract from RDE come back, where they came

right out with the solicitation and said here is the PBP milestone schedule. Quote that. If that is the US government's preferred method, why can't you put it in every RFQ that way?

Mr. Mark DeYoung

I think the point that was a saving point for me is when PBP's aren't in it, and so you go back in and want to negotiate them in, then there is remuneration for negotiating a PBP process into your process. That has never made sense to me.

Dr. Dean L. Bartles

Anyone from industry doesn't like PBP's?

Ms. Patricia L. Felth

I'm not familiar with the use of them on production contracts. It is tied to specific accomplishment, right?

Dr. Dean L. Bartles

I'd be happy to send you some examples on the 120 tank program; we've been using them for 15 years.

Mr. Mark DeYoung

Most of the major production ones are PBP's, because you have to define process. What it basically does is allows the contractor to bill based on progress by the government team has to sign off on them so that you can bill and collect, but it allows industry not to finance the government by floating the cash.

Ms. Patricia L. Felth

During the time from contract forward?

Mr. Mark DeYoung

From purchase.

COL Ole A. Knudson

If we do this does price go down because you don't have to pay the interest on the money? Is that what you are saying?

Dr. Dean L. Bartles

You should see a more competitive price as stated up front in the RFQ, yes.

Mr. Mark DeYoung

The whole idea is for industry as stated by your own leadership in DOD that we are not suppose to be financing the government. Without PBP's we are financing.

COL Ole A. Knudson

If you are financing it, right now you are charging us.

Mr. Mark DeYoung

It is more efficient for you with PBP's.

Ms. Patricia L. Felth

So we won't sign papers for component qualification.

COL Ole A. Knudson

Firm Field Price contracts that are in place right now, modified them to do this, we would actually see a reduction in cost.

Dr. Dean L. Bartles

Every time we've modified a contract to get PBP's incorporated after the fact, there's been a reduction in price.

Mr. James Sutton

Tank ammo is a system contract.

COL Ole A. Knudson

It shouldn't matter if it is a systems contract or not.

Mr. Mark DeYoung

When you do that, the business is just going to do the math, they are going to take the cost of capital outstanding for cash that are floating, they are going to take it by the discount borrowing rate, and that amount is what you are going to get back.

Dr. Dean L. Bartles

What I don't get is, senior leadership in DOD said, this is what we want you to use, that direction went out to all the PCO's. We saw the letter. Our senior leadership, industry says we'd like you to have that but we see it applied sparingly. EPA clauses, Economic Prize Adjustment. We have a situation in the last 2 years where the commodities metal market has increased so rapidly, that I know for a fact, some suppliers are losing millions of dollars.

Mr. Mark DeYoung

I'd like to welcome you to small cal ammo.

Dr. Dean L. Bartles

I don't think that's fair, I don't think that is partnering. I think an EPA clause should work both ways. If the commodities metal market tanked, there should be some vehicle we would have to share their savings back. I don't think all that risk should be passed on to the contractors like we have currently.

Ms. Patricia L. Felth

We are trying to do longer term contracts so that increases the risk.

COL Ole A. Knudson

Look at a bid; does someone force you to put the bid in?

Dr. Dean L. Bartles

Here's the deal, when you look at metal pricing over a 30 year period, and you see a certain stability, a certain peak and certain valley, you can statically predict within so much of a deviation where that is

going to be. What happens when it spikes through the roof like no one has seen before, is that fair for you or me? What if it spiked down the other way, would that be fair for you.

COL Ole A. Knudson

We'd pay if it went down.

Dr. Dean L. Bartles

I'm proposing an EPA clause that works both ways.

Mr. Mark DeYoung

Part of the issue with the EPA clause that Dean is referring to on these contracts, there is a share of the load, there is a share above and it's capped. You could find yourself in a situation, you find yourself in world markets that beat all the historical trends you used to bid and take responsible risk and there's a cap on there. When you go beyond the cap, it is solely at the risk of the contractor. I think the issue for us at ATK would be looking at EPA clauses, making sure we understand it is an up/down, give/take. But why is it capped? And when you reach the cap, it is all industry's problem? When you have an unprecedented market, it is an all industry problem, when you have a market that is fluctuating within historical forms, it is give take and everybody is ok. But when you get to that extreme, on certain market, where you will never see on the charts, the way it is written down, it is all industry's risk. And I think that is what you are getting at.

Dr. Dean L. Bartles

That is exactly right; it is also EPA clauses are used sparingly again. Individually decided by PCO's. On particular procurements, some of them, we don't have EPA clauses.

Ms. Patricia L. Felth

PM's influence PCO's so we can try to influence that. If we don't have EPA clause in the contract we don't have a basis to make any adjustment. On new contracts we can put in EPA clauses but not on old contracts.

Mr. Matthew T. Zimmerman

If the FAR Caps the 10%, how would we affect that?

Mr. Michael Hutchison

That would be the challenge. The language in the FAR prescribes under what conditions that clause is included in a contract. It's not a preferred method. And keep in mind an EPA clause shifts price risk to the Government. Profit should be adjusted. Although the FAR does provide a degree of flexibility to the PCO in terms of when an EPA clause is appropriate. Two years ago a pricing issue came up with regards to steel prices. Jim Loehrl made the decision he was not going to go across the board with the EPA clauses; it would be looked at on an acquisition by acquisition basis.

Dr. Dean L. Bartles

What is the logic in that, why would you not apply it uniformly?

Ms. Patricia Huber

The program has to hold those dollars in reserve. Some it is a cost factor associated with meeting the EPA clause.

COL Ole A. Knudson

The FAR clause is capped at 10%, would that be adequate?

Mr. Joel E. Gregory

Most of them are capped @ 3%.

COL Ole A. Knudson

It affects ammo probably as much as any commodity the army buys.

Dr. Dean L. Bartles

Tanks have a lot of steel and steel fluctuation prices have been pretty radical in the last couple of years as well. Certainly ships have a lot of steel. I don't know what they do with ships or tank contracts.

COL Ole A. Knudson

It affects the LCMC, the industry.

Mr. Mark DeYoung

There is a case study that answers your question. That is how Northrup Gruman got around their EPA clause. They went out and changed the specification of the steel in the contract. Bought to a different spec and it was outside of the EPA clause and they got reimbursed by the government. So you've got to change your spec tied to the EPA clause. Changed the spec on the steel, got out of the EPA clause, and billed for it.

BG James E. Rogers

This is exactly the types of issues we need to take on. Let's see what we can do with it.

Dr. Dean L. Bartles

Anyone else that has any other things they want to put on the table?

Mr. Richard W. Bregard

Do we want to address other functional items like what is happening in the environmental law changes that is going to affect us all thru mediation? If Boxer gets a hold of that committee, APE limits go to 1 part per billion. If that is the case, the manufacturing base is in a real serious problem, more than it is today. There are a lot of changes going on in the environmental side of the house that is flowing down. The other thing that is going on in DOD in the acquisition community is fixed price development contracts. There is a committee that the AirForce is on that they are working on it today and they are trying to soften the language as they try to flow that down shortly.

Dr. Dean L. Bartles

We have that right now; we have a MRM draft solicitation that has a fixed price portion of the program.

COL Ole A. Knudson

The law says you have to justify to the MDA if you are not going to use a fixed pricing, doesn't say firm fixed price, it says fixed price (including fixed price incentive fee). You have to justify it to the

MDA if you are not going to do it, why not a development contract. Your technology is not mature or something. If it is just an integration of things they've done before, I think they are saying, why can't somebody that knows what they are doing estimate that.

Mr. Richard W. Bregard

I agree what you are talking about and it is an issue that is going to affect us all. Is that a topic that we want to address as a committee here?

COL Ole A. Knudson

The Europeans looks at us like we are nuts. They have firm fixed prices on everything.

Mr. Mark DeYoung

We had that big issue with some company, and afterwards congress stepped in and said we are not going to again put on industry the risk of development.

COL Ole A. Knudson

Under this new law that would be a plus, plus because there is no way you could justify that technology is mature.

Dr. Dean L. Bartles

Those are good ones. I will work those issues with Matt and BG Rogers and we'll figure out how we can attack them. As far as putting them on the agenda and how we can address them in 2007.

Mr. Robert C. Crawford

Munitions and Logistics Readiness Center

Spent time talking best value, typically when we talk about best value it means quality is more than important than schedules. Continuous improvement, how we've been doing for many years. Would it be wise somehow to make sure we are improving sector by sector? A bench marking way to so see if there is an overall improvement in quality is there an overall improvement in schedule performance. Is there a way we can do that somehow someway, say hey we are just not seeing these works.

Mr. Mark DeYoung

This is good idea, I think most of industry when they look at best value, what industry sees is "it is always the price stupid", don't forget that, it is always the price. We may all be cynical but we all believe best value just creates a lot of latitude for selection and it is always the price and that is always weighted even though the RFP comes out and says it is 25%. So I think Bob, to really go through that, I'm pretty sure if you look at industry they are nodding their heads, there is a lot of skepticism about best value. And does it really drive the things you'll look for, so maybe we need the metrics you are talking about, the measurement.

Mr. Robert C. Crawford

We talked about we need to improve overall quality. If we say that and really mean it we have to be able to say it reflects back into true quality. How do we start to say the actions were taken, steps we're taking, the Lean Six Sigma, is it really resolving a significant change?

Dr. Dean L. Bartles

The PM's, do you track the number of escapes by product on all your programs?

Ms. Patricia L. Felth

Track acceptance test, I don't know how far back that data goes.

Dr. Dean L. Bartles

I know the tank system program we, the team, government team and industry team, we track number of escapes at the component level. If we had a critical defect at a supplier and it got to the load plant, they didn't catch it at the supplier plant, which is an escape.

Mr. Robert C. Crawford

You might look at it from a volume perspective; you might look at it from a financial perspective, might help us with soft landing type issues, and might look at it on technical issues. Are the TDP's getting better; we could start looking at how we measure ourselves.

Mr. Robert R. Harris

How are we doing on meeting schedules? Several years we got together on ICAP, we were shocked to find out we were not doing too well on meeting schedules.

Dr. Dean L. Bartles

That is one of Bob suggestions, we figure out how to measure, if quality is getting better, if schedule is getting better. We are doing all the Six Sigma stuff, what is the payoff. Is price going down?

COL Ole A. Knudson

I don't know, guess we see.

Dr. Dean L. Bartles

It was suggested that we talk about any significant sector changes from the sector leaders within your sectors. For example, GD purchased SNC so that is a little bit of a change in a couple of sectors. That acquisition is completed and it is GD-OTS Canada, it is a separate business reporting into Mike Wilson. Since the last meeting we've had, we just purchased Chamberlain, which is part of us now.

COL Ole A. Knudson

Purchased Scranton?

Dr. Dean L. Bartles

Purchased Chamberlain, which was the operator of the Scranton army plant.

BG William R. Holmes, USA (Ret)

Because GD-OTS bought SNC, we had to buy out American Ordnance. That transaction is still being reviewed by the federal trade commission and I was informed this morning that it has been approved by the lawyer who was in charge of this at the FTC and the recommendation has been submitted to the commission to approve the transaction, hopefully this will be finalized in the next 30 days.

Mr. Robert R. Harris

The makeup of the Pyrotechnic sector has changed significantly over the past several years due to acquisition and consolidation. The sector now has two major suppliers of countermeasures, which

account for most of the sector's business. The first is the Esterline Defense Group, which is a consolidation of the former BAE passive expendable countermeasures (formerly Tracor), FR Countermeasures and Wallop Defence Systems in Europe. The other is the Chemring Group, which consists of Kilgore, Alloy Surfaces, Technical Ordnance and Chemring itself in Europe. In addition, a third source of pyrotechnics, Allied Technologies, now exists in the US which consists of Titan Dynamics Systems and Mecar USA.

Dr. Dean L. Bartles

Any other sector leads have any other changes in their sector?

Mr Hewitt has been kind enough to give us a quick synopsis on BRAC.

Mr. Jyuji Hewitt

I had the pleasure of going out to Kansas with Ms. Condon, the new executive director to the commanding general, who by the way is an operator. She used to be the deputy chief Army G-3, so she understands. She has 2 missions, 1 make sure we are continue able to do mission. Take a look at the equipment for the industrial base, make sure the government takes and uses the equipment that we have and best effectively uses that. The other part is to execute law. She is going to stay on those 2 missions she is going to go off and continue working continue looking our plants and depots. We are in the process of doing business case analysis to what type equipment do we actually need. Our challenge right now is to get full funding to do those BCA's because that is a different part of funding that has not been fully released. We are working our way through that and hopefully by the end of this month we'll have it.

Mr. Joseph Homko

As you move thru 2007 would it be useful to have a short BRAC update? I think at last meeting there was some discussion about implementation planned for executing BRAC. Does that ring a bell with anybody?

Mr. Jyuji Hewitt

I think that is one of the topics for Tuesday, so that will come out.

Dr. Dean L. Bartles

Today was suppose to be the last meeting for some our sector leads that have been on the committee as that sector representative for the last 2 years, Mark DeYoung, Joel Gregory, Ralph Hayes, Joe Homko, and John Maniatakis. So first of all, I'd like to say, thanks to those 5 gentlemen for the last 2 years of service. And then I'd like to ask you to stay on for 1 more meeting because we have not identified your replacements we would like to have 1 meeting of overlap.

We also have a couple of government representatives on the ICAP that are retiring.

BG James E. Rogers

We have two individuals I would like to recognize. One is Steve Mapley, who is going to retire later in the year, and the other one is my right hand man, Bob Crawford, who is going to go out with a bang real soon. Unfortunately, he is going to be a huge loss to everyone, because of his knowledge base and his forethought and all the things he does. We appreciate both of them as individuals. There is a lot of brain power leaving the organization and they will be sorely missed.

Dr. Dean L. Bartles

As far as our next ICAP meeting, we are kind of up in the air whether there is going to be an Armaments Symposium this summer.

Mr. Joseph Homko

We plan to have one in June in Parsippany.

Dr. Dean L. Bartles

We'll plan to have an ICAP meeting in June, if not it will be in October so stay tuned to the emails for the latest update.

**ACTION ITEMS**

Assigned To	Action Description	Due Date
A. Stoneburner	Send out Sector Listing	As updated
D. Bartles M. Zimmerman BG Rogers	Fixed Prices	

**CLOSING COMMENTS**

No

Meeting adjourned until June here in Parsippany, NJ.

**ATTACHMENTS**

1. Sector Update, Hammonds
2. Sector Update, Gregory
3. Sector Update, DeYoung
4. Briefing, Felth