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JPEO-CBD  
Topics for Discussion  
AT CBDAIF January '08 Meeting

# Table of Contents

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- Overall Product Quality
- Quality of Low Rate Initial Production
- Defense Contract Management Agency (DCMA) Role
- Contracts
- Statements of Work
- Independent Research and Development Efforts in the CBD Sector

# Overall Product Quality:

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- How Important is Quality?
  - In a collective protection environment, product quality can be the difference between life and death for our soldiers. It is therefore a very important part of the program and is taken very seriously.
  - Quality is important and a formal quality program at the supplier should be a requirement on any contract. ISO has become the key compliance program for most companies in the US. Beyond this compliance, added value for programs like Six Sigma is probably marginal at best. There is certainly a much higher cost associated with a strict compliance to a Six Sigma type program with not much tangible return on that investment for industry or the government.

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- We spend much more time doing quality inspections of Chem Suits vs other protective apparel. We can not afford to have one tiny hole in the cloth or one “loose” seam to make it into an end item as the consequence is the risk of having that item pulled for test – fail – and ultimately be cause for an entire lot being rejected. We build that extra Quality cost into our bid and I believe the Govt reaps the benefit of getting a premium product to the user
- Is there a Cost vs. Quality Trade-Off?
  - I believe that delivering a quality product will actually save versus cost additional money to the government and also to the contractors. The cost to the contractor of poor quality can be

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found in scrap and rework in the factory, schedule slips which drive cost, warranty repair and support costs. Additional costs to the government due to poor quality show up in additional O&S costs, schedule slips and contract support costs. There are cases where additional requirements are levied on the program which drive cost in the hope of additional quality, but in actuality simply drive up additional costs with no benefit. For example, on CBPS Rock Island has imposed a non-standard FAR clause 52.246-11 called "HIGHER-LEVEL CONTRACT QUALITY REQUIREMENT" which imposed additional quality restrictions and therefore cost, without additional benefit in my opinion.

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This clause calls for the approval by local DCMA of all rework of parts to make them fully compliant to the drawing even though the contractor already has standard ISO procedures in place that are readily available for review by the Government. In addition, not granting MRB authority to the contractor, or as a minimum MRB authority to the local DCMA, also drives up cost and may impact schedule.

- What are the Consequences of Non-Conforming Products?
  - In some cases non-conforming products may impact the primary mission of the product and therefore put soldiers at risk. In other cases, non-conforming products will increase down time and increase O&S costs of the system. For the contractor, Non-Conforming parts increases scrap and rework costs. It also increases support costs and may impact schedule deliveries.

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- What are Roadblocks to Quality?
  - Roadblocks or impacts to quality can be due to external and internal influences. External influences or roadblocks can come from unrealistic requirements that drive cost and cause lower yield or rework while not really impacting the quality or overall performance of the system. Care should be taken to make sure that requirements are completely reviewed, justified, and the cost versus potential increase in performance is known. Other impacts to quality could be schedule driven. When inadequate time is given for proper development and testing of a product prior to production, quality will usually take the hit. Quality can

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also be impacted by breaks in production line. The government should work with the contractor to try and keep a steady production rate from the factory. This will drive more efficient production, less turnover of personnel and consistency of processes which all improve product quality.

- Should a Formal Quality Program be a Requirement in Contracts?
  - I believe that a formal quality program should be a requirement in the contract, but it should be flexible in format so that the existing quality procedures that the contractor has in place, if they have all of the required elements, can be used as is without modification. This provides the required processes and

# Overall Product Quality:

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procedures that can help to drive quality while not requiring the contractor to modify standard procedures for each contract which drives costs and actually reduces quality by making it harder for the process to be followed because it is unique by contract.

- Has Industry Increased or Decreased its Quality Infrastructure?
  - We are constantly updating our quality infrastructure to strive for improvement. This would include updating of processes, training and adjustments to infrastructure to match changes in philosophy and need. DRS strives to drive quality down to the lowest level possible in order to increase effectiveness and efficiency. This would include internal fabrication and also

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supplier quality. Where long term suppliers can be established, we attempt to qualify these suppliers and their quality procedures so that quality is checked through an approved quality system at their factories and suppliers prior to ever getting to DRS. This saves cost, schedule and improves quality.

# Quality of Low Rate Initial Production:

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- What are the Reasons for Quality Problems in LRIP?
  - In many cases, LRIP is the first time that products are produced on the production line with production processes and typically different personnel than were used to build prototype or FAT units. Quality issues arise primarily due to the learning curve associated with building a new product. Processes may require updates, personnel require new or different training and suppliers have the same issues. Acceptance test procedures also may require updates in order to insure that quality issues do not get through the system.
  - CB Items are different in the fact that it takes so long to "qualify" the item for production, that everyone, especially industry, wants

# Quality of Low Rate Initial Production:

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to shift quickly into production. The specifications and quality acceptance limits are usually finalized during the qualification process and are based on limited lots of production - many times only one lot. The specification, therefore, reflects no production variability. The JPM-IP has recognized this fact and has been reasonable in working with specifications throughout the LRIP period to ensure the government gets quality items that are reflective of those qualified but are also reflective of what Industry can manufacture within the limitations of their manufacturing process. The government does not have a reasonable process to allow changes in the production of an item that would increase the quality of the item. Since the "qualification" of a CB item is such a long and costly process, it is easier for the government to say no change is allowed

# Quality of Low Rate Initial Production:

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than to look for reasonable compromises that could be beneficial to both the company and the government. Industry does not stand still during the 3-5 year qualification period. Improved manufacturing processes and materials become available and are often inserted into commercial products while the government continues to require outdated production methods. Government documentation is often unclear during this phase. Better coordination with industry on document review prior to production start is necessary. Ramp-up volumes in LRIP need to be well thought out and established with mutual agreement. Live agent lot testing on LRIP lots can be slow and can lead to multiple lots being manufactured before a quality issue is identified.

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- Are these Quality Issues Unique to CBD Products?
  - No, they are typical to any new build.
- What can Industry and Government do to Improve LRIP Quality?
  - Try to have FAT unit build as closely as possible to the production processes that will be used in LRIP. Also, allow adequate lead time for process checkout and system testing during LRIP to insure the bugs are worked out of the process prior to shipping units. Allow adequate quantity of LRIP units to fully test out the line as it will run during production.

# Defense Contract Management Agency Role:

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- How do you (Joint Product Offices and Industry) View the Role of DCMA?
  - DCMA represents the eyes and ears of the Government for the contract on a daily basis. They act to validate contractor conformance to the contract and provide guidance where appropriate.
  - General rationale for organization is reasonable. However, the system is quite inefficient. The manufacturers of the items are many times more knowledgeable than the QARs and compliance interpretation can be difficult because of the lack of basic understanding. Knowledgeable QARs are not always readily available throughout the country - can result in meaningless inspections (just there to check the box) or delays in inspections.

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- My honest “personal” opinion is that DCMA adds too much extra cost for the service they provide. This is based on actual facts. SNC has contracts for the same item through DSCP and direct with PEO-Soldier. The cost to the Army of getting product shipped direct to their distribution facility (managed by a civilian contractor) and then out to the field is much lower than the cost through DSCP to the field

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- Is DCMA Management a Benefit, Detriment or Just "There"?
  - In most cases, DCMA is a benefit. They are typical on sight and therefore can provide quick response for inspection and answers to questions. We have an excellent relationship with our QARs at our production facilities. We try to include DCMA as part of the team to make sure they are kept up to date on all pertinent issues and program status. As with all personnel, there are some that are more cooperative and support a team relationship than others. A good QAR will understand the importance of meeting the overall program objectives and place them at the highest importance, potentially to the detriment of checking all of the boxes in a black and white contract.

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- How Might DCMA Provide More Value to both Industry and the JPOs?
  - I believe that more authority could be flowed down to the DCMA representative. They are the ones that are on the floor everyday and should be the best to understand and resolve issues on a daily basis and in a timely manner. I am currently not familiar with the review system if any that is in place to grade performance of the DCMA representatives. I believe that the contractor and the program offices should be requested to submit input into that review process. The contractor may have a unique perspective on which DCMA employees have the program and government interests in mind and which ones may just be going through the motions.

# Contracts:

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- Are Contracts the Right Size and Type for Competition?
- Are Contract Awards Fair?
  - In most cases yes, but there are exceptions. On CBPS M3 there was concern that the solicitation and scoring criteria did not take O&S and life cycle costs into account. It is my belief that the lowest life cycle cost proposal did not win. It was not an evaluation criteria and therefore was not a factor, yet is crucial to the fielding and support of the systems and the number one cost driver for the government.

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- Are Contracts Administered Effectively?
  - We have some contracts that are administered effectively and some that are not. Much of this depends on the KO that is assigned to the program. In many cases, contract administration is not viewed as a government/industry partnership. There is no attempt to set up a win-win working relationship. There is very little trust from either side. The contracting office seems to try and take advantage of the situation with little or no regard for how this will impact the contractor's performance on the contract or the contractor's fiscal performance to its shareholders. Also, there does not seem to be an effort to save the government money by the contracting office. In many cases more requirements are deemed better in order to cover all the bases even though it will drive program cost. There also seems to be

# Contracts:

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little regard to payment structure and cash flow for the contractors. A better understanding from both the contractor and contracting office perspective may be beneficial to develop a win-win approach.

- Do Contracts Protect Both the Company and Government?
  - That is the intent, but in many cases they seem to be lopsided towards protecting the government. This could be for payment terms, IDIQ ranges and order quantities, breaks in production, etc.
  - DSCP awards multi-year (option based) contracts based on their projected needs of the user. Our 66P contract has become borderline profitable based on the fact that after the first years

# Contracts:

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minimum quantities were purchased, the options years were exercised with significantly reduced minimums and with no option for rebidding the smaller quantity. Compounding the issue of getting reduced minimums, they are then given out in small quarterly delivery orders. If the Govt is going to buy less than expected at least order it in one delivery order which would allow the manufacturer of the materials and garments to add least make a reasonable production run. The quarterly up and down costs Industry but also has a negative impact on overall product quality.

- What Might Improve the Contracting Process?
  - Better training on both sides to understand the other's perspective. Trying to build a team approach between the government and the contractor.

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- One big concern for industry is the uncertainty associated with contracts. Within the past few years, Industry has seen requirement numbers change drastically from the RFP to an actual contract award. Industry will not be able to continue to invest in programs where the actual contract award is 50% less than originally projected. No link for industry as procurement of items are transitions to service O&M budgets. How do we effectively monitor, or even better be invited to participate during this period to ensure uninterrupted production? POM/JRO/JPEO need alignment sooner rather than later.

# Statements of Work:

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- Are Statements of Work Clear and Specific?
  - No in most cases. Improvements can definitely be made in providing clear and concise SOW. In many cases the SOW is not well defined and it creates issues further down the line during proposal efforts and execution of the contract. Realistic CLIN structures has been a recurring issue.
- Are there Inconsistencies?
- What Improvements Could be Included in Statements of Work?
  - Seek contractor input into the draft SOW whenever possible prior to making it a firm document. We would be glad to work with the government to generate a SOW that is clear and specific. Also, keep in mind cost impacts when ancillary/

# Statements of Work:

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- secondary requirements and scope are added to the SOW outside the basic core requirements to design/build etc. These secondary requirements may significantly drive cost without providing much benefit to the program.

# Independent Research and Development Efforts in the CBD Sector:

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- Does the Size of the Chemical Biological Defense Market Enable Industry to Maintain a Robust Independent Research and Development (IR&D) Capability?
  - Recently this has improved, but in the CBD sector historically there has been limited production funding. Lack of production funding decreases the incentive to the contractor to invest in IRAD efforts. There also could be better cooperation/coordination of government and industry IRAD efforts. This should be an initiative on both sides, but we can increase our effectiveness by working together on strategic IRAD initiatives.

# Independent Research and Development Efforts in the CBD Sector:

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- Government needs to be aggressive in offering innovative methods for incorporation of privately funded research into their portfolio of R&D efforts. Although agreements such as Other Transactions are possible, they are rarely, if ever, used in the area of protection. The government is often funding efforts for products that already exist or that could more effectively be developed by Industry. Without protection on intellectual property, Industry is reluctant to interact cooperatively with the government. Government researchers sometimes seem to view Industry as competitors rather than collaborators. The rationale is usually that they do not want to show preference to a single company, even if the company is the only one capable of providing a desired technology. The size of the U.S. CB defense market segment is large enough to support **focused** independent R&D, but the volatility of budgets, lengthy

# Independent Research and Development Efforts in the CBD Sector:

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qualification processes, evolving requirements, and difficulties associated with technology insertion all factor into whether or not a company invests in CB Defense or not.

- Having spent a 25 year career in the protective clothing business (at Natick, as a fabric manufacturer and now as an apparel manufacturer) I can state that there is a fraction of the IRAD that existed 15 to 20 years ago. The industry that provides protective materials has all but gone away. The reason – JSLIST. While this program may have had a great approach (I was the original Program Engineer at Natick when JSLIST kicked off), execution has left a lot to be desired. Many very capable industry players have exited the business because they have spent millions trying to match a fingerprint. When you develop and test protocol and spec around one product you will continue to have only that one product.

# Independent Research and Development Efforts in the CBD Sector:

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- How Does Government S&T Investment Compare to Industry IR&D?
  - Informal Comments so far Indicate:
    - The United States may Constitute Half the World CBD Market
    - Large Companies Reinvest ~ 7-9% of Sales in IR&D

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