

AIMING FOR UNIFORMITY

Dragoon Troopers assigned to 1st Squadron, 2nd Cavalry Regiment fire 40 mm practice rounds from a M320 grenade launcher in November 2014 during their grenade launcher qualification range at Grafenwoehr Training Area near Rose Barracks, Germany. Particularly in ammunition procurements, a TDP can benefit the program manager and Soldier in purchasing items that are identical; however, that benefit might be offset by an increased overall cost and potential production risks. (Photo by SGT William Tanner, 2nd Cavalry Regiment)



Whose Design Is It, *Anyway?*

PM CCS changes its procurement strategy from performance specification to a technical data package, and while the approach isn't right for every procurement because it can be expensive and time-consuming, it's expected to provide the shop with real competition in future procurements and higher quality in the ammo itself.

by Mr. Ken R. Schulters

Its name notwithstanding, the M1006 40 mm Non-Lethal Sponge Grenade, which is intended for close-quarter engagement and is fired from standard M203 and M320 grenade launchers, is no Nerf toy. Indeed, it can be lethal. Over the years, the M1006 was manufactured by a single contractor by means of a document called a performance specification (P Spec), which simply demands a particular set of performance parameters. The problem with that approach is that the grenade's final form and look may change from contract to contract. Overall costs can be high because the contractor has no competition. That's why the Project Manager for Close Combat Systems (PM CCS), under the Program Executive Office (PEO) for Ammunition, changed its acquisition strategy.

When a program manager develops an acquisition strategy, he or she may be faced, based upon market research, with the choice to use one of two ways to order ammunition: a P Spec or a government-owned technical data package (TDP). A P Spec enables the government to buy an end item without dictating the design; generally, the government is primarily concerned with the performance of the item. For munitions, it is a difficult choice when dealing with critical aspects like safety, reliability, interoperability and configuration management. A TDP may have an initial cost and schedule impact because it requires contractors to have or acquire the correct tooling and equipment



NONLETHAL CAPABILITY

U.S. Marines from 2nd Battalion, 6th Marines fire their M203 and M32 grenade launchers with nonlethal rounds downrange in March during a riot control exercise at Camp Lejeune, NC. (Photo by Cpl Kaitlyn Klein, Defense Media Activity)

to build the item according to the TDP. However, it can reduce the risk of follow-on procurements and provide greater configuration control for the program manager. Another significant upside is that the competition a TDP enables can reduce costs.

Looking for ways to reduce costs and to enable competition, PM CCS undertook a three-year project with a team of 10 core and shell members to develop a TDP for the munition. In the meantime, production continued using the P spec.

THE TDP ALTERNATIVE

As an alternative, especially for ammunition procurements such as the 40mm or 12-gauge nonlethal munitions, a TDP—a set of detailed drawings, dimensions and assembly instructions that, when followed, leads to identical parts and finished products—gives the government the ability to control the design of the end item. With ammunition, having each piece look and perform the same reduces confusion, increases confidence and eliminates the need for new training.

However, potential production risks belong to the TDP owner—the government, in this case. Dimensional tolerances, compatibility of parts and components and even the end-item performance are part of the technical data and the government’s responsibility. The overall cost of the end item is usually higher as well, since inspections during production can be more rigorous and frequent than with P Spec in order to ensure quality.

The M1006 40 mm Non-Lethal Sponge Grenade is an example of a munition that was procured using both approaches. With the TDP, rather than having bidders submit their own designs that would have to be evaluated against the P Spec requirements, bidders received a drawing package and PM CCS evaluated their proposals based on their ability to produce in accordance with the TDP requirements. The TDP also enables more contractors to bid because they may have the capability to do the work, but may not have the capability to create their own design to compete in a P Spec solicitation.

PM CCS derived multiple lessons learned from this effort in the areas of time and cost:

TIME SAVED

Developing this TDP and detail specification (DTL) took approximately three years, including the inspection of every drawing for correctness, dimensions, tolerances, notes, clarity and availability of parts and material.

PM CCS contracted an independent third party to build, test and verify that the TDP and DTL were producible.

COST CONSIDERATIONS

Using a third party to build, test and verify the TDP before using it saved the government many thousands of dollars. Without this effort, the production contractor would very likely transfer to the government the cost of:

- Identifying the flaws or errors in the TDP.
- Making changes to their equipment and tooling.
- Replacing any materiel ordered associated with the erroneous TDP.
- Paying for idle assembly line workers.

Furthermore, this approach eliminated travel costs for government employees to witness the build and tests. It also eliminated the additional cost for members of the shell integrated product team to update the TDP and DTL.

CONCLUSION

Ultimately, the government benefited from this change in acquisition strategy. The TDP gives the government greater control over the end item, which will provide greater flexibility when dealing with launcher changes or future improvements. When using a P Spec, there was always the potential for added cost in qualifying a new design. A government-owned TDP avoids this cost.

Despite the additional time and costs associated with procuring an ammunition item from a TDP, under the right circumstances, the government can derive much value from owning the design of munitions. It maintains control over their form, fit and function and can use the TDP to promote competition and drive down future procurement and support costs.

For more information, contact the author at ken.r.schulters.civ@mail.mil or go to the PM CCS website at <http://www.pica.army.mil/pmccs/MainSite.html>.

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HANDS-ON LEARNING

Army National Guard LTC Sean Klahn takes a kneeling position with the M203 grenade launcher fitted with the M1006 sponge grenade and ground dispersal rounds, in April as part of a U.S. Army War College elective. The sponge grenade was procured using a TDP, a potentially less costly approach than the previous acquisition strategy that involved the use of a P Spec. (U.S. Army photo)