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Ammunition Quarterly

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From the Program Manager



*Mr. Jerry Mazza
Program Manager for Ammunition*

A warm welcome to our first Ammunition Quarterly of 2004, a new year that brings new ideas, and new challenges. Our community is changing before us. It has been many years since I have witnessed the type of synergistic engagement among the Ammunition Leadership within our Corps, from the Operating Forces AND supporting establishment. It seems however, that as we tackle the issues and obstacles placed before us, new challenges emerge. As we step off this New Year, it is imperative that we, as a community, remain focused and vigilant in our mission. Key initiatives, which will serve to enhance our business practices, have been laid out. We have commenced the MCCDC Studies and Analysis led

“Ammunition Logistics Chain Efficiency and Policy” study that will serve as the reckoning point in optimizing our Class V (W) postproduction logistics chain. Linked to this study effort is the recently chartered “Ammunition Logistics Focus Team (ALFT)” which will execute iterative transformation initiatives (ITI) related to the study. That team, made up of a diverse segment of Occupational Field experts, will also play a lead role in our future and has already enjoyed some “wins” in its’ relatively short life.

Complimentary to the study and ALFT is the recent Ammunition Executive off-site (AEO) held during November 2003. This forum brought together every senior Ammunition Officer and Civilian decision maker within the Marine Corps to establish THE strategy of optimizing the End-to-End (E2E) Ammunition Logistics Chain. These, and other ongoing initiatives are not separate rather; they are complimentary of one another. Detailed information can be found by accessing the PM Ammunition Website.

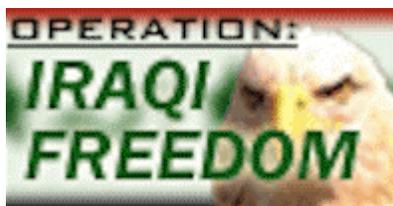
In the past two editions, you may recall articles on my Acquisition Programs and Budget Division and Logistics Division. In this edition, you will see the third installment, “Inventory Management and Systems Division Sets Sail” that will round out the Life Cycle Management mission of my office.

Mr. Dennis Zarnesky, my Division Head for Inventory Management and Systems, and his staff discuss some innovative steps they have taken or are taking in supporting our Marine Forces. I am sure you will find that article quite educational. Further, I draw your attention to two of the operationally focused articles in this edition. First, CWO2 Howe provides an insightful overview of Field Ammunition Supply Point operations during OIF...a mission we train for! The second article was submitted by Captain Earl Nash regarding the Special Purpose MAGTF and the complex mission of retrograding a large compliment of ammunition and explosives to CONUS. Much of what Captain Nash articulates will no doubt finds its way in future revisions to our “Class V (W) Regeneration, Reconstitution, and Retrograde (R3)” plans.

Throughout this edition, you will also find various updates and articles of interest. Clearly, there is much occurring across the entire USMC ammunition domain. With forces redeploying, our efforts shall remain focused on their support of ammunition and explosives. And clearly, that support is an Ammunition Community team effort. Semper Fi

Special Purpose Marine Air Ground Task Force – Kuwait

Captain Nash, Commanding Officer, Ammunition
Company, 2D Supply Battalion, 2D FSSG,
MARFORLANT



So there I was, in Kuwait, surrounded by thousands of pallets of ammunition, hundreds of containers, and an eager group of young Marines and an equally eager group of not-so-young civilian ammunition professionals. Our mission, to reconstitute the MPF with Class V and to retrograde the remaining stocks to CONUS or some other directed location. Welcome to the Maritime Prepositioning Force Special Purpose Marine Air Ground Task Force (MPF SPMAGTF).



Retrograde Compound

The MPF SPMAGTF was established in June 2003 in Camp Fox, Kuwait. The ammunition detachment consisted of 89 Ammunition Technicians, 40 Aviation Ordnance Technicians, 20 Civilians from Crane, Indiana, and 10 Civilians from NWS Charleston and NWS Yorktown respectively. Within a five-month

period, the MPF SPMAGTF would provide ammunition for seven MPF vessels and retrograde approximately 2,500 other containers to CONUS.

In order to successfully conduct retrograde and reconstitution operations, the SPMAGTF had to design and see constructed the facilities necessary to support those R3 operations. Utilizing the facilities and process designs from Desert Storm and the Advanced Base Functional Component System document as a template the SPMAGTF built two containerization buildings, a pallet cleaning and inventory pad, a pallet preparation and inspection pad, thirty above ground barricaded magazines, and 24 kilometers of semi-improved gravel roads.



Containerization Building

The process for R3 operations was based on ship loading timelines, future MPF maintenance cycles, and the availability and suitability of stocks retrograded to the SPMAGTF from the Camp Coyote FASP as well as directly from the using units. The first step in the process of MPF reconstitution was the validation of the shipload plans. This was done in concert between MCSC, the MARFOR's, and NWS Charleston personnel. The MPF SPMAGTF received the working document in the form of an excel spreadsheet that provided both summary DODIC information as well as specific container breakdowns. The SPMAGTF utilized this information and selected lots from storage that best met the requirements. MCPD personnel assisted this endeavor by providing the SPMAGTF with a preferred lot asset listing. Stocks were pulled by container loads from the storage magazines and moved to a pallet preparation and inspection pad. At this location, a crew of civilian ammunition professionals inspected the

quality of the ammunition pulled and conducted maintenance operations as required. They rebuilt pallets, banded, squared, verified lot numbers, inventoried and repacked items to meet the containerization and shipping standards. Once a full container load was ready, it was moved to the pallet cleaning and inventory pad. Utilizing high-pressure air, all of the sand, rocks, and other environmental contaminants were removed from the pallets. The pallets were then inventoried and moved into the containerization buildings. One building was utilized for class V (A) and consisted of six container bay areas. The second building was utilized for class V (W) and consisted of 12 container bay areas. Within each



Finishing Container Load

building were warehouse type forklifts, vice the rough terrain forklifts used in the magazine areas, a wood working area to prepare the container blocking and bracing, and agriculture inspectors. Prior to a container being loaded, the container was inspected for serviceability and cleanliness. The stocks going inside the containers were inspected for agricultural compliance, compatibility, and once again for an inventory check. Stocks were then loaded into the containers, the containers sealed, placarded, and moved to the respective ships staging area.

The next step in the process was to provide the Blount Island Command (BIC) personnel in Kuwait the MDSS II data so that they in turn could determine a stow plan for the ammunition containers and provide back to us a container sequencing list. BIC also provided the LOGMAR labels for every container. As the ships arrived and were ready for loading, the SPMAGTF G-3 called forward the ammunition

containers to the Ash Shuaiba Port. At the port, the exteriors of the containers were washed and inspected once again by the agricultural inspectors prior to being loaded aboard the MPF vessels.



Preparing Containers

The SPMAGTF was also responsible for paying back the Army stocks borrowed during OIF, prepositioning available stocks within the permanent Army ASP for future I/II MEF units training in Kuwait, retrograding stocks to CONUS, and transferring custody of serviceable ammunition outside of its shipping configuration to an Army sponsored ammunition refurbishment contract held by the Kellogg Brown and Root Contractors.

Paying back the Army and prepositioning stocks were time consuming but relatively simple evolutions. Stocks were selected that met the requirement. Documents were cut. Stocks were shipped to the designated locations.

The CONUS retrograde proved to be a more challenging operation that required a great deal more coordination and paperwork that was at first identified. The process for building containers was similar to the MPF process listed above. However, once retrograde containers were built or identified (several hundred containers of sustainment stocks shipped in were never opened), the SPMAGTF requested disposition instructions from the inventory management section of PM Ammo. With disposition instructions in hand, the SPMAGTF cut documents, ensured the containers were agriculturally certified, placarded, and moved to the



Container Building Bays

Theater Support Area (TSA). The TSA is a transient container storage area for stocks arriving or departing the theater. Each container and its contents had to be entered into the Joint Munitions Center ammunition movement database called MTMS. This proved to be a laborious process that required SPMAGTF and JMC personnel to duplicate the keypunching already done in ROLMS so as to generate a data file that would process into the Worldwide Port System (WPS). Additionally each container required a hazardous declaration form that again duplicated much of the information already in ROLMS. With the container information loaded in MTMS and transmitted into WPS a ship could then be requested to move the block of containers. From identification of requirements (full container ready for loading) to ship arrival was a period of approximately 45 days. The number of support activities involved in loading a single ship once it arrived was impressive. For example, the last ship we loaded was the *Virginian*. For that one ship we had host nation contracted truck support provided by the Army's 359th Transportation Support Command, RTCH support provided by the 321st Ordnance Battalion and 211th Transportation Support Group, container wash down crews provided by KBR and the 211th, ship load plans provided by MSC and MTMC, security provided from Army MP's and Naval Coastal Warfare commands, ship pilots provided by MSC, and various other organizations working behind the scenes. It is not just the Marine Corps moving ammunition. We are one part of a very large logistics entity.

Serviceable stocks that we did not have packing material for or for various reasons did not make it on to

a ship headed to CONUS were transferred into the KBR ammo refurbishment project. These stocks, over the course of the next year will be inspected, repacked, and returned, as directed by MCSC, into the general stockpile.

Let me highlight a few areas for your consideration:

Personnel – The FASP was broken down into two functional areas, operations and storage, each with subordinate areas. Operations included MHE/Maintenance, container inspection and movement, containerization buildings, pallet preparation, inventory, and records. Storage included magazine sections, disposal operations, and inventory teams. In retrospect, 89 Ammunition Technicians was insufficient to efficiently conduct R3 operations on the scale that was required. Sections were spread very thin and the competing priorities required exceptional flexibility on the part of the Marines and the NCO and SNCO leadership. The Marines however did what Marines do, they recognized the scope of the mission and put in the extra hours to see the job done. My hat goes off to all of them.



Container Operations

Equipment – The SPMAGTF FASP utilized standard ammunition handling tools such as crimpers, cutters, and stretchers as well as a variety of power and air tools not normally utilized by ASP personnel. Each containerization building required four air compressors; three nail guns, miter and circular saws, air hoses, couplings, and a variety of associated consumables. Initial operating and safety classes were required to familiarize the Marines with the equipment they would be operating. The first day of container operations saw

one single container completed. As the Marines increased their proficiency however, the number of containers built increased to an average of 15 per day or better. An additional issue associated with the equipment was the power requirement. Tools ordered were procured from a variety of sources. Those procured from CONUS were predominately 110V. Those procured within Kuwait were predominately 220V. As a result, two generators were required for each building. With the heat and the blowing sand, maintaining the equipment and generators in an operating condition required constant attention.

MHE/CHE – Ammunition pallets are heavy. Containers are even heavier. MHE and CHE proved to be a critical component area within the FASP. The FASP had a baseline T/E of 4 RTCH's, 10 commercial warehouse forklifts, two commercial rough terrain EBFL variants, 12 assorted tactical rough terrain forklifts, and two trams with forks and buckets. The environmental conditions, rugged terrain, and distances within the FASP degraded the equipment and required a round-the-clock maintenance effort for the SPMAGTF's MHE/CHE maintenance section. Twice daily PM's increased the operational readiness of the equipment. Warranty issues with the tactical gear provided additional challenges, as broken equipment could not be repaired until a certified contractor was brought in to repair the item.

DISPOSAL OPERATIONS – This proved to be one of the most dangerous and time consuming operations within the FASP. Within the thousands of pallets turned in to the FASP were thousands of unsafe and unserviceable items ranging from small arms, to mortars, to grenades, to missiles. An inspection and segregation site was established to accommodate these items. Systematically, the stocks were inspected and either placed in the magazine area or moved to the grade III site pending disposal. With the assistance of the MARCENT Explosive Safety Officer, Capt Campbell, a disposal location was sited within the FASP. There, FASP Marines and EOD personnel conducted disposal, by detonation and burning, of several million dollar of unserviceable and unsafe ordnance.



Container Loading

MPF Unique Issues – The SPMAGTF FASP found out early on that it did not have a full grasp of containerization operations for the various MPF vessels. For example, some ships, in order to maximize their loads, required the use of 8-foot containers vice the 8.5-foot containers. The 4.25 (half-height) containers come in at least six varieties, each with a different rib and tarping configuration. The warehouse forklifts required to load the 8-foot containers can have a frame no higher than 83.5 inches, otherwise they can't drive into the container. The various packing configurations for different NIINs effect the number of items that can go into a containers, i.e. J143's, depending on their packaging can fit either 36 or 48 into a container. Lessons were learned quickly, but only through painstaking rework and adjustments. We as a community need to prepare an MPF reconstitution SOP that defines these issues. I'll put together a first draft.



Loaded Container

Systems – A lot of them out there and they don't talk to each other without a lot of data manipulation.

Requisitions sent to the SPMAGTF from supported units had to be manually inputted into ROLMS. MDSS II data extracted from ROLMS and sent to BIC for the MPF ships had to be manipulated in order to generate their load plans and LOGMAR labels. Data required for WPS had to be manually inputted into one portion of MTMS, manipulated by JMC contractors, pushed into another data area of MTMS, manually worked by SPMAGTF and JMC personnel, transmitted to WPS, and finally an email data file sent for each individual container to MTMC SWA. The very same data had to be manually inputted again for the hazardous declaration forms. ROLMS doesn't talk to the Army's accounting program.

Training – Many of the difficulties the SPMAGTF experienced were directly related to training deficiencies. We need a more robust career progression-training program. Specifically, our SNCO and Officer corps needs formal training in TPFDD, MDSS II, MPF Operations, and the functions and roles of other service and support organizations. Our NCO's need formal training in technical ammunition serviceability inspection criteria. The ground ammunition inventory processed by SPMAGTF Ammunition Technicians was approximately 800 million dollars. That equates to roughly 9 million dollars per individual Marine. Our formal schooling consists of five weeks at Redstone for our junior Marines, a month long refresher course for our NCO's, and a month long managers course for our SNCO's and Officers. We need more.

It is not my intent to paint a bleak picture, but rather to focus on areas that we need to improve upon. The Marine Corps marched from Kuwait to Baghdad in three weeks and never ran out of ammunition. Every Ammo Tech out there (SYSCOM, Pendleton, Lejeune, Greenville, Rome, Topeka, Crane, Toole, BIC, etc.) played a role in that success. Success however is only achieved through critical introspection and corrective action.

I would like to personally thank each and every Ammo Tech and Support Organization out there. Your efforts, both small and large, played a part in preparing the Marine Corps for success on the next battlefield.

Captain Nash was assigned as the Ammunition Company Commander, 2D Supply Battalion, 2D FSSG for the SPMAGTF MPF Kuwait.

Redstone Goes International!

CWO5 Patterson, Redstone Arsenal



In support of the Defense Threat Reduction Agency (DTRA), Program Manager for Small Arms and Light Weapons (SALW), the Marine Element Instructor Staff has been conducting Physical Security and Stockpile Management (PSSM) assessments and training in various locations around the globe. DTRA is a DOD agency chartered to conduct counter-proliferation programs of AA&E worldwide. The illicit trade in SALW exacerbates regional instability, the arming of terrorists, criminals and insurgent groups in zones of conflict around the world. To help prevent illicit arms trafficking, states must ensure that their national SALW holdings are properly secured and managed, and that any excess stockpiles of weapons or munitions are destroyed. In many countries, however, limited resources and inadequate training can leave stockpiles poorly secured and susceptible to theft or illegal transfer. To address this problem, the U.S. provides interested governments with an orientation to U.S. standards of physical security and stockpile management for SALW. DTRA executes support programs to host countries aimed at improving their AA&E management and control procedures. Major Diaz (USMC) runs the SALW program for DTRA and coordinates all assessment team visits.

Operations tempo permitting and with approval from Training Command, Marine Detachment Personnel at Redstone have augmented technical representatives from DTRA SALW program and become part of their assessment team as well as their follow on seminar teams. Both assessment and seminar periods are approximately one week in length.





Ecuador

Last January, In support of the DTRA (SALW) Program, CWO3 Holtzclaw, now retired, began our participation in the program by conducting an assessment of Ecuador's stockpile after they had experienced a catastrophic explosive event in Rio-Bamba, a major storage site near the capitol city of Quito (see AQ July 2003).

Gunner Holtzclaw identified significant safety and security problems and aggressively recommend an immediate course of action as well as follow on training from Marine Element. The Ecuadorian military agreed and requested training support from DTRA. In late March 03, CWO5 Patterson and GySgt Singleton developed and conducted an AA&E training package geared specifically to the situation in Ecuador. Fifty-two Ecuadorian military personnel attended basic classes in AA&E Compatibility, Quantity Distance, Storage, and Security. After the classroom instruction, the students were then broken down into two groups and conducted mock inspections of actual storage sites located in Ecuador. The students were able to identify deficiencies and formulate recommendations to improve overall ammunition operations. At the end of the training each student received a completion certificate. In July, the Ecuadorian government then sent senior military personnel to Redstone Arsenal on a technical visit to learn first hand how the U.S. military trains AA&E personnel.



Nicaragua

In April, In support of another DTRA SALW initiative, Master Gunnery Sergeant Shustack, the NCOIC at Redstone conducted a preliminary PSSM of Nicaragua AA&E assets.

The assessment team was originally scheduled to look at an armory and an ammunition storage area. Due to the current political climate in Nicaragua the

team was granted access to one central storage site. The assessment team provided the Nicaraguan Army several recommendations for immediate corrective action to enhance the Nicaraguan Army's current security posture.

During the meetings preceding the assessment as-well-as during the out brief Nicaraguan officials all expressed an interested to an offer by DTRA for a follow on seminar in the June - August timeframe. This seminar would provide additional security, safety, and stockpile management procedures to those personnel charged with the day-to-day operations in armories and ammunition storage areas. Nicaraguan Government Officials will formally request the additional visit through the U.S. Embassy in Nicaragua. Once the request is received by DTRA personnel they plan to ask the Marine Detachment, Redstone for their assistance as facilitators for a portion of the seminar.



Bosnia

In late May 2003, CWO5 Patterson linked up with DTRA Liaison SFC Sawyer and DOS representative in Vienna for a mission briefing and follow on transport to Sarajevo, Bosnia. The team then met with the US Embassy personnel for visit schedule and security briefing. Two sites were scheduled for inspection, in Bosnia. The assessment team conducted evaluation inspections of both sites and made both safety and security recommendations to the government. These included the recommendation to demilitarize obsolete and unserviceable AA&E as soon as possible.



EL Salvador

DTRA again requested technical support from Marine Element in July 2003. A Physical Security Stockpile Management (PSSM) assessment of the Salvadoran Army's storage of Arms Ammunition and Explosives (AA&E) was conducted from 28 - 31 July 2003. The assessment team was comprised of Major

Diaz, USMC, DTRA, MSgt Taylor and SSgt Morrell, USMC, Marine Detachment, Redstone Arsenal, Alabama, and WO1 Eccles, JACIG (Joint Arms Control Implementation Group). Major Sanchez, USA, USMILGP, San Salvador. A Salvadoran Army Officer facilitated the tour of AA&E facilities, escorting the assessment team and interfacing with base/unit commanders. Everyone the assessment team came in contact with exhibited exceptional levels of cooperation, professionalism and willingness to apply corrective measures.

The assessment revealed the Salvadoran Army infrastructure and equipment still remain in a state of repair from the devastating earthquake that occurred in San Salvador in 2002. The government has taken many steps to secure the Arms and Munitions that were in affected structures by moving assets into already cramped facilities. The Salvadoran Army has many weapon systems that are outdated, and munitions that are either obsolete, or there are no weapon systems that can fire them. Financial resources are not available to assist in the quick repair of existing facilities. There is not a designated MOS (military occupational specialty) for Arms and Munitions. There are no SOP's (Standard Operating Procedures) for the handling, storage, security of Arms and Munitions, which should be established to standardize all Stockpile Management.

The Instructors from Redstone conducted a week long storage and security training seminar for Ecuadorian Ordinance Corp personnel and the assessment team made AA&E recommendations in three phases, near term 3-6 months, mid term 6-9 months and long term 1 year and beyond. The program was successful and did identify problem areas for the Salvadoran military to address.



Angola

CWO5 Patterson linked up with State Department representatives in Brussels, Belgium for mission briefing and follow-on transportation to Angola. The visiting team met with the US Embassy personnel for visit schedule and security briefing. Angola has just begun to rebuild after 25 years of civil war and conflict. Several sites within Angola were scheduled for inspection. These included both active disposal sites



Disposal Site (1)

and storage locations. All assets were in various stages of stability and serviceability. The team made strong recommendations to sanitize the area and improve disposal operations.



Disposal Site (2)

The Angolans indicated that there had been an accidental detonation of grenades at this location and required EOD assistance to safely secure the area. No evidence or information was available as to the cause or initiation of this detonation. This area was secured due to its location within the perimeter of the base. The safe determination and demilitarization of the grenades will also require a large scale EOD supervised process. No real PSSM possible at this site.



Storage Detonation Site

The team was then transported to a weapons disposal facility located on a military compound. Here the team was permitted access to the stockpile of



Demilitarized Weapons

demilitarized small-arms weapons as well as captured weapons for disposal. A variety of weapons systems were under going demilitarization at this location. The area was somewhat secure due to its location within the compound and the presence of a secondary interior perimeter fence. Most of the weapons had been rendered unserviceable and were awaiting final cut of the receivers.

The team was transported and was received by the commander of the Regional Military Command. After a briefing we were convoyed to a former agricultural research facility that was now being utilized to store confiscated unserviceable AA&E. Some useable stocks were also stored here. The Angolan

military indicated that this was an interim facility to be utilized only until a more adequate location could be adopted. Open fields that had been mined during the civil war surrounded the building. These were still being de-mined as we arrived. An evaluation of the site was determined and recommendations made to local commander.



Temporary Storage Site

Finally, The team convoyed to the 5th Regional Military Command for a briefing and then convoyed to a remote exterior storage / disposal site. The site was located in an open area sparsely populated with brush and civilians. The area held large caliber artillery and anti-aircraft rockets. The stock had been stored here for a long period and there was no indication that it was to be moved. The Angolan Military was interested in any EOD type support they could get to dispose of their unserviceable and dangerous stockpile. The assets here were all earmarked for disposal. Recommendations to improve safety and security at this site were also provide by the team.

The assessment team ended the trip by recommended that the Angolan military request U.S. support to conduct extensive EOD operations to identify, catalogue and destroy all unserviceable AA&E, and to also foster a working relationship with the US military to provide technical advisors to assist in the development of procedures and training curriculum on the safe and secure storage, handling and transport AA&E.

All Redstone personnel involved have gained some insight into how foreign military organizations handle AA&E in contrast our policies. In each case, the instructors all return with the same observation... We take our training and regulations for granted. We are

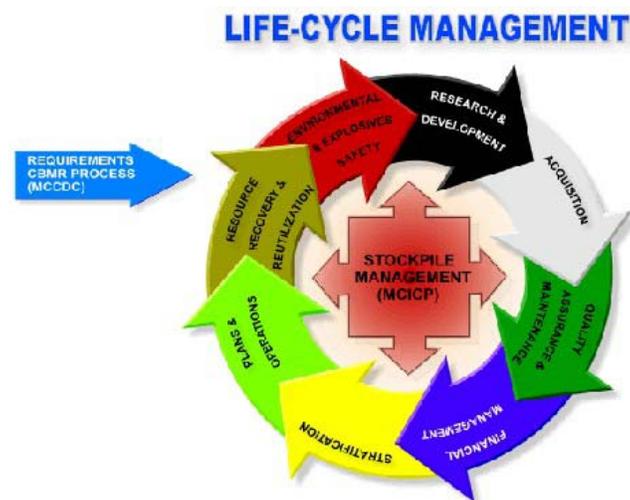
fortunate to have a professionally trained community that is able to apply proven standards and procedures that ensure the security, safety and serviceability of our AA&E assets. Most of the countries we have supported do not have integrated training programs designed to provide a knowledge base in a specified discipline such as AA&E safety and security. Effective training has always been and will continue to be the key to successful operations. The entire staff here at Redstone is dedicated to that end and we will continue to work to provide the Marine Ammunition community and any other organization that requests our assistance with the best training materials and instruction possible.

CWO5 Patterson is currently assigned to the Marine Corps Ammunition Schools located at Redstone Arsenal, AL.

Inventory Management and Systems Division (IM&SD) Sets Sail

Mr. Zarnesky, MCSC-PM Ammo, Head, Inventory Management and Systems Division

The mission of IMSD is to manage the ammunition stockpile, develop and maintain configuration control of Ordnance Information Systems, and conduct Class V (W) accountability oversight. The Corps' supply class V (W) inventory control point (ICP) functions within the Division as part of the Inventory Management (IM) Team.



The Division is comprised of three (3) teams one being the IM and the others are Systems (SYS) and Inventory Accuracy (IA). As a point of reference the IM and SYS teams were part of the Life Cycle Management and Logistics Division respectively prior to the stand up of IMSD in February 2000. As depicted in the Life Cycle Management wheel the ICP serves as the hub.

Being the hub of the process does not make this function any more or less important than the other functions depicted on the wheel but rather signifies that we must know what we have and where it is. Even before the stand up of the IMSD, an effort was started to improve asset visibility and accuracy by the conduct of a review of the ICP, which resulted in a rather voluminous report, dated April 1999. There were seven (7) recommendations contained therein one being the possible need for an inventory accuracy section. This need coupled with the fact that the IM team charged with managing the stockpile did not have direct access to the SYS team caused the logical formation of the IMSD.

Great strides have been made at knowing what we have and where it is. The ICP is considered the total item property record holder for supply class V (W) and currently utilizes the Marine Corps Ammunition Accounting and Reporting System (MAARS II) as its system of record. MAARS II is a batch process system aggregating records from over 150 sites of all services.

TOTAL TRANSACTIONS/REJECTS

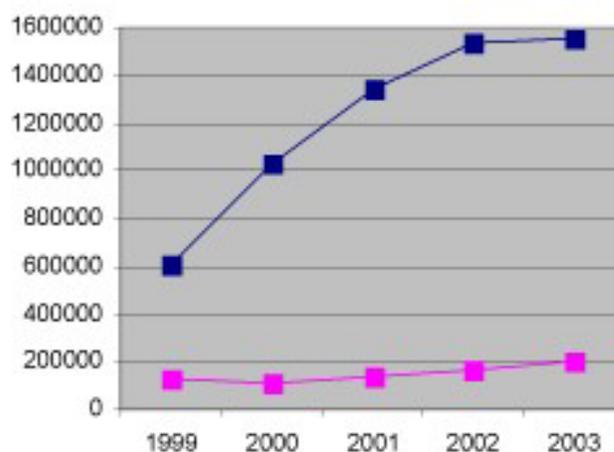


Figure 1

The error rate prior to FY99 was consistently in excess of 50% and is now at a more manageable rate averaging 11% during the last four fiscal years. Communication and education with activities holding OT assets was paramount in obtaining reporting to the ICP. Over the fiscal years the IM&SD team increased visibility of assets while decreasing errors simultaneously as graphically depicted in Figure 1 and numerically in Figure 2. As previously mentioned an ICP review was conducted and several recommendations were made in that review relevant to processing errors, which were remedied, as feasible.

CY	Transactions	Rejects
1999	605416	131251
2000	1030122	107350
2001	1344211	141246
2002	1539884	162368
2003	1550682	201110

Figure 2

Your IMSD is a synergistic group not fearing change but rather spearheading it. Knowing what we have and where it is was the first step in our continuing journey of becoming the DoD model for supply class V management. The division identified the disparity in requirements between those contained in the Total Munitions Requirements (TMR) document and the Forces generated requirements in support of contingency plans. This disparity is being aggressively addressed as it has significant impacts across the logistics chain.

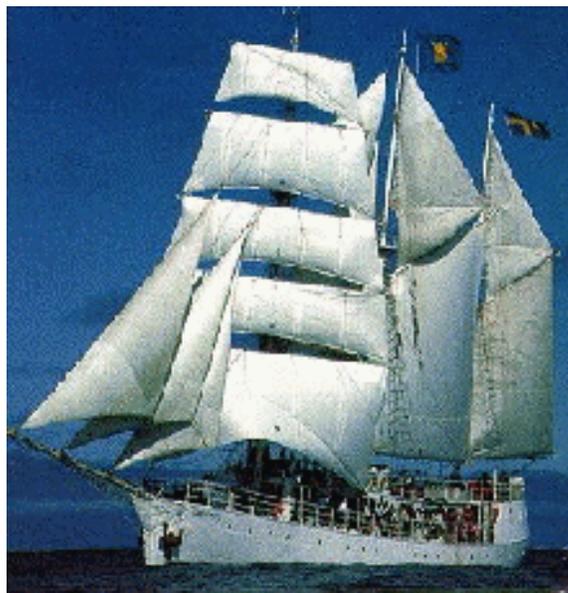
IMSD was faced with a critical decision when the Joint Ammunition Standard System (JAMSS) was terminated leaving the Services' to find a material solution. As previously mentioned MAARS is a batch process system that would need to be modernized or an alternative identified to support "real time" asset visibility as directed in the CINC 129 Requirements Document. Modernizing MAARS would be a costly and laborious endeavor. An analysis of alternatives was conducted and the most favorable alternative was to partner with our Navy counterparts and the Navy Ammunition Logistics Center (NALC) and develop a Naval system for supply class V. The joint solution is known as the Ordnance Information System (OIS) that

brings together functionality of many legacy systems into a web based shared data environment. An OIS article appears in the Jan 2002 edition of the AQ.

The OIS route still left us faced with finding a using/supported unit solution that was identified during the Ground Training Ammunition Review Group (GTARG) but held in abeyance during the JAMSS effort. An article on this subjected entitled "Ammunition Accounting and Management Below Retail" appears in the Jan 2002 edition of the AQ.

The foregoing challenges were further taxed by the need to ensure all efforts complimented the overarching Global Combat Support System (GCSS) effort. To ensure we stayed the course in our journey we teamed with the operating forces and the MOS producing schoolhouse in standing up an Ammunition Logistics Focus Team (ALFT). An article outlining our course is available in the Jan 2003 edition of the AQ and is entitled "The Winds of Change... Ammunition Logistics Focus Team (ALFT)".

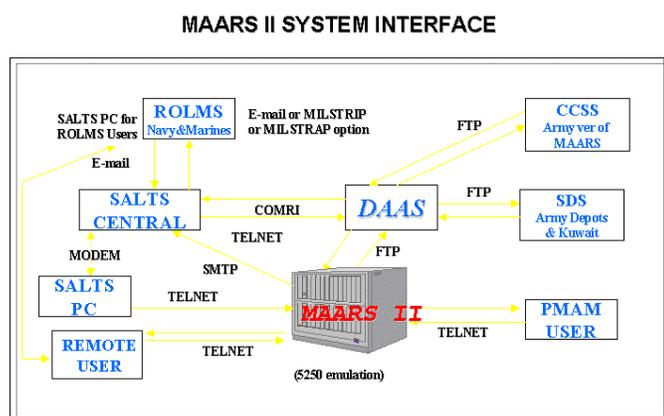
Each of the masts of the IMSD Barkentine that hold its sails allowing it to catch "The Winds of Change" have articles that follow. Rest assured your IMSD Barkentine is jibbing its sails catching as much of the winds of change as possible ensuring we not only know what we have and where its at but that we can get it to the right clime and place on time.



Barkentine (Sailing Ship)

As the mid mast of the IMSD Barkentine the Inventory Management Team continues to jib striving to know what we have and where we have it. Sounds simple, doesn't it? Add to that knowing what we need and when we need it there and things get a little more complicated. Add in proper use of assets and tracking the multiple reports (Transaction Item Reports (TIR), disposition requests, and requisitions from storage activities; serialized expenditure reports from using units) and the myriad tasks for the IM team grows exponentially.

Knowing what we have and where we have it: All activities holding Marine Corps ammunition are required to submit TIRs each day. These TIRs provide all of PM-Ammo with a daily update of the activity's inventory. At the beginning of each month, each activity is required to submit a Periodic Lot Report (PLR); this gives us lot-level visibility each month and is utilized as the basis of the IA team's inventory accuracy reports. We are constantly striving to identify all activities that hold Marine Corps ammunition and to enforce the reporting requirements to ensure we have an accurate inventory. All of the Marine Corps ASPs and Naval Weapon Stations are consistently reporting we are making a concerted effort to ensure accurate reporting from Navy ships carrying LFORM and MTA ammunition.



Essential to having an accurate inventory is an accurate accounting of serialized assets. We cannot remove a serialized asset from our property record without an expenditure report from the using unit. Each month the MARFORs receive a report identifying serialized assets issued to using units for which we have not received an expenditure report. I am happy to say these reports have dropped for over 600 assets per MARFOR to less than 100 per MARFOR, but we are still far from our goal of 100% accuracy.

Knowing what we need: Once a year, we review our inventory against our Total Munitions Requirement (TMR). This is the first step in stratification, or cross leveling between Services. Stratification is a congressionally mandated review does by all Services. Each Service identifies items that are either in long or short supply. Then all Services meet in March and Services in long supply in a particular item offer that item to Services in short supply. A more detailed article on Stratification appeared in the April 2003 issue of the AQ.

Version 1.0 of September 2003

Main Topics

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It is possible to advance through this presentation by clicking on a main topic to the left or one slide at a time by pressing the space bar. This presentation includes all updates of TAMIS-R as of August 2003 and provides links to Revision 4 of the User Manual; last updated in April of 2003.

Knowing when we need it: This past August, IM teamed with the Ammunition Logistics Focus Team (ALFT) to support the rollout of the Training Ammunition Management Information System – Redesigned (TAMIS-R). TAMIS-R is a replacement for the antiquated Statement of Annual Requirements (SOARs) programs by providing a web-based application that allows using units to forecast their requirements to ASPs worldwide. It also allows everyone in their hierarchical chain to see their forecasts and to receive a copy of their ammunition request as it goes to the ASP. This forecasting enables the ASPs to requisition ammunition in a timely fashion, cutting down on priority shipments, and raises the ASP's ability to support all requirements. TAMIS-R also provides each unit with the ability to track their allowance and record their expenditures. This should make end-of-year expenditure reporting much less labor intensive than in years past.

Proper use of assets: Using up small lots and less than perfect assets in training is good stockpile management. As is using assets before they hit the end of their service life. Good stockpile management also means loading the Maritime Prepositioning Force (MPF) ships and Apportioned War Reserve (AWR) locations with the best available assets. IM is currently spearheading a new lot-grading system, an improvement on the current

MPF grading system that some of you may be familiar with. This system will aid IM in filling requisitions and using all assets in the best way possible.

During Operation Iraqi Freedom, IM team members really stepped up to the plate. As part of our regular duties, IM provided supportability analyses for the Combatant Commanders' ammunition requirements, origination data for Time Phased Force Deployment Data (TPFDD) requirements, and created and filled over 575 requisitions for movement of ammunition into theater. Then IM, in concert with the Systems team, set up ROLMS Central at PM-Ammo. Five sustainment shiploads worth of ammunition were entered and formatted into "disk transfer" files for the ASPs in country. When these ships off-loaded in Kuwait, the Marines there had an automated record of the ammunition they were receiving that could be uploaded into their ROLMS, rather than having to hand jam each asset separately.

It is this kind of "service to the fleet" that is the hallmark of IM. Our purpose is to support Marine ammunition requirements in training and in combat; it is what we do best.

As the IMSD Barkentine aft mast the Inventory Accuracy Team jibs its sail because the impact of Inventory Accuracy (IA) for Class V (W) covers a broad spectrum from reliability to readiness. Policy, programs and tools in place are essential for overall support not only to train the war fighter but also to support the war fighter. Program 15 (Inventory Accuracy) is an essential element of the Explosives Safety Inspection (ESI) program that is mandated by NAVSEAINST 8020.14/MCO P8020.11 and replaced the Field Supply and Maintenance Analysis Office (FSMAO) analyses of the past. Program 15 is a checklist-based inspection, which provides specific errors identified by the inspector and are presented in a report at the end of the inspection. The identification of errors does not generally mean the activity is substandard, what the errors lead to is a deficient process that is not clearly defined which effects the activity's inventory accuracy. Identification of the process deficiency is key and the implementation of enhanced business processes can eliminate them in totality increasing the efficiency and accuracy of the activity, however only if the activity is willing to modernize and accept change. Over the past year we have been examining ways to modernize and simplify the way we do business during P15 ESI's and the conduct thereof in effort to more readily identify overall process deficiencies vice singular events.

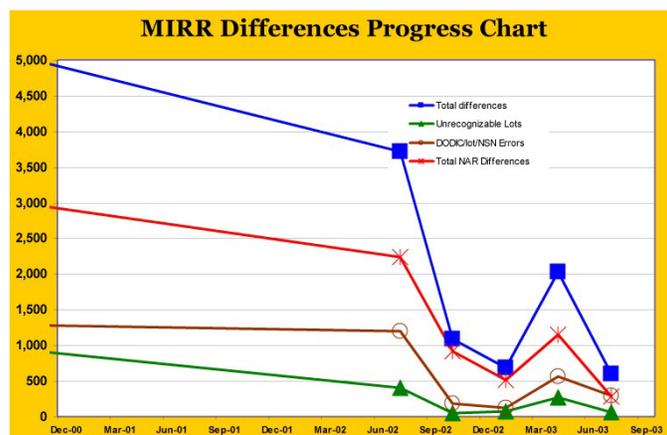
Activities are required by MCO P4400.150 Consumer Level Policy Manual, MCO P4400.151 Intermediate Level Policy Manual and various 8000 series directives to maintain a myriad of Quality Control and Audit Programs which encompass the entire spectrum of accounting for assets. Additionally, Headquarters Marine Corps (HQMC) provides the Inspector General inspection; Operating Forces provide Supply and Maintenance Assistance Team (SMAT) inspections and all Commanders/Managers have the Marine Corps Internal Management Control Program (MCO 5200.24C) at each activity. So we say to ourselves, with these aforementioned abundant Programs and Inspections, what is the real requirement of the Operating Forces and what products of efficiency can we provide while reducing the redundancy of checklist based inspections.

In effort to modernize we look at the direction of the former FSMAO analyses and their change to the future. During calendar year 2002 the Marine Corps Field Supply and Maintenance Analysis Office (FSMAO) announced a change in the way business was and will be conducted. One change is the name, from FSMAO to Marine Corps Logistics Chain Analysis Team (MCLCAT), however the most apparent change is the paradigm shift away from policy compliance and checklist-based analyses. This change is to analyze and facilitate the application of best operational practices in order to improve the effectiveness and efficiency of existing and emerging Integrated Logistics Chain Processes in support of MAGTF War fighting capabilities. Staying in concert with HQMC, the Marine Corps Class V (W) P15 is currently under review for possible shift from its compliance and checklist-based process to an Ammunition Logistics Chain Analysis to better serve the operating forces.

An element of the Inventory Accuracy Team in regards to improving accuracy at activities revolves around Periodic Lot Reporting (PLR) and the Monthly Inventory Review Report (MIRR). Ammunition assets are assigned a lot number, serial number or both and provide a means to track reliability, configuration and performance of the assets. Additionally when malfunctions occur, safety issues and restriction information is disseminated by lot and or serial numbers. PLR's are generated by the owning activity on a monthly basis and forwarded to the Marine Corps Inventory Control Point (MCICP) for induction into the ICP's mainframe system, Marine Corps Ammunition Accounting and Reporting System II (MAARS II). The PLR's are critical because they provide the ICP with the

Lot Number and Condition Defect Codes (CDC), which are utilized to position and distribute Class V (W) throughout the Marine Corps. During 1999 an initiative was started to ensure that activities knew what Periodic Lot Reporting is, how it affected their assets and why it was important to report to the MCICP. During that initial review the MCICP was receiving only 13% of the total available "PLR" reports, today we currently receive upwards of 80% or better on a monthly basis. Reason's for not receiving reports stem from personnel change over, system errors, and electronic communication down times. It is our intent to continue to communicate with and educate the ammunition community on this vital report and its importance. In the near future there are plans to post the receiving metric of the PLR's to the Knowledge Management Portal (KMP) in effort to provide a tool to managers.

From the PLR's comes an essential report provided to reporting activities in the form of the Monthly Inventory Review Report (MIRR). Lot and serial numbers are extracted from the MCICP MAARS II and inducted in a process, which evaluates the DoDIC, NSN, Lot Number, and Condition Code of the asset for various possible errors. Detailed information on this process can be found in the April 2003 Edition of the Ammunition Quarterly with an article titled "Monthly Inventory Review Report". Once possible errors are extracted they are combined and forwarded to the owning activity for review and possible correction of assets. The below chart depicts the type of possible error found during the specific month reviewed, since inception of this report, possible errors have steadily decreased overtime improving accuracy of the Marine Corps stockpile.



MIRR Progress Chart

The MIRR report not only aids the activity in accurately reporting assets to the ICP, but also improves

efficiencies of the activity. The report is currently being prepared for automation into a Web environment reducing the redundancy of e-mail, phone calls and electronic communication errors. Within the Web the activity will have the ability to respond to possible errors and view their monthly accuracy report concurrently as part of their Metric Based Report Card.

Another initiative the IA Team was involved in was the "Issue and Receipt of Containerized Assets" in correlation with the Marine Corps Maritime Prepositioning Ships (MPS) which provided an elevated level of automation improving efficiency and accuracy within the Program. The Retail Ordnance Logistics Management System (ROLMS) added increased functionality enabling the Blount Island Command (BIC) and the Marine Liaison Team (MLT) of Charleston the ability to issue and receive entire MPS ship on and off loads of containerized assets. This increased functionality, improved efficiencies, accurately depicted the transfer of assets and significantly reduced workloads from 15 hours to less than one per vessel for both Class V (W) and (A). Detailed information on this process can be found in the April 2003 Edition of the Ammunition Quarterly with an article titled "Enhanced ROLMS functionality for MPF".

An Explosives Safety Officers (ESO) orientation and refresher course is currently in joint development by the Naval Ordnance Safety and Security Activity (NOSSA) and the Program Manager for Ammunition Environmental and Explosives Safety (EES) and Inventory Accuracy Team's, which is titled "AMMO-74". The AMMO-74 provides personnel assigned duties as the ESO training in technical and managerial aspects of explosives safety programs. The Inventory Accuracy/Management (P15) portion of the course will provide a broad overview of functionalities with regards to Class V accounting to ESO's from both the Navy's and the Marine Corps perspective. Additionally, it will provide tools (MIRR report, metrics, etc...) to aid in the monitoring of activities that the ESO is inherently responsible to.

As the fore mast of the IMSD Barkentine the Systems Team has ensured its attached square-rigged sail is comprehensive and interconnected. A System is often thought of as a computer and software providing some purpose or function to ease our lives. In fact, a system is a collection of any and all computers, machinery, processes, and people required to support a given function. The function of Systems Branch is to facilitate the operations in support of that Marine in the

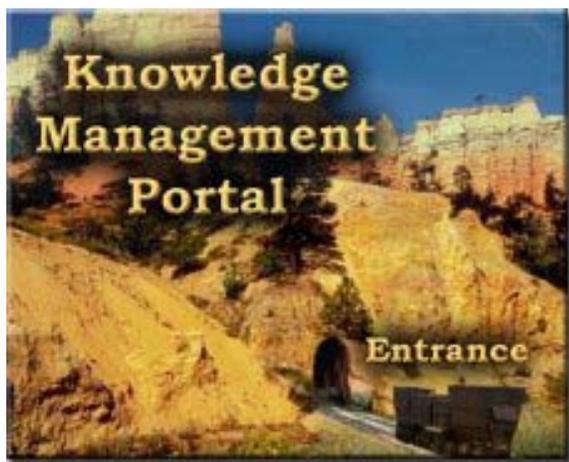
field. To achieve this goal, we make use of a system of systems.

Our core team comprised of four military and civilian, complimented with a contract team, is a collection of years of cutting edge experience from many services, MOS, degrees and experiences – we refer to ourselves often as forward-thinking logisticians and automation experts. At the same time the defense logistics community is called on to streamline processes and continue the progress toward leaner, more efficient operations. Never has there been a time of such rapid change and dynamic improvement in the defense logistics arena. The Ammunition Community turns to Automation for the implementation of solutions, called ‘eAmmo‘.

One of our chief goals is the organization and presentation of information. Data abounds in the work place but data in itself is not very useful. It is only when it has been collected, organized, analyzed and used in understanding that it becomes valuable information.

The process of collecting data, organizing it, transforming it into information can be called Knowledge Management (KM). KM is a catchy phrase often thrown around but the idea is as old as information itself. The bottom line of KM is:

- What questions require answers?
- What data do I possess?
- What data do I need?
- How do I organize it and transform it into information to answer #1?



The Knowledge Management Portal (KMP) was born of the desire to use the plethora of data available in

the ammunition community, and present it as information to the ammunition community. The Systems Team uses a System of Systems to accomplish its goal of facilitating support to the war fighter. These are all encompassed in what is called a larger Knowledge Management Enterprise (KME). KME is the sum total of all the Government Civilian Personnel, Military Personnel, Civilian Contractors, and all the information systems working together towards a common goal.

Within KME are the now five web based servers; two of which are in Quantico supporting our primary sight, 3 developmental servers in Stafford, and another mirror server in California. We invested heavily into our hardware to ensure you the customer can always access your information with minimal downtime. With the birth of NMCI it is our hope to see a common intranet to ease the bandwidth restraints. Our designs are to maximize the potential, to aggregate and integrate ammunition data from multiple sources and translate it into actionable information, when accomplished personnel adapt and depend on this service. All of the KME servers will then have complete mirror images and now server mirror to improve speed of access by delimiting the physical distance to your access on KME! Knowledge Management also means to eliminate the many desktop applications with different data on each workstation.

Knowledge signifies things known. Where there are no things known, there is no knowledge. Where there are no things to be known, there can be no knowledge. We have observed that every science, that is, every branch of knowledge, is compounded of certain facts, of which our sensations furnish the evidence. Where no such evidence is supplied, we are without data; we are without first premises; and when, without these, we attempt to build up a science, we do as those who raise edifices without foundations. And what do such builders construct? Castles in the air.

It was common to get many answers to the one question of how many mortars do we have? Ms. Ross's team has really purified the processes on the MAARS allowing us to say we have an Inventory of Record, meanwhile Mr. Black's team consistently tracks down accuracy in reporting and the results have pasteurized our accuracy. As I stated in the beginning, many desk side answers with no accountability for accuracy – this has been eliminated for the most part and we have produced consolidated applications on the KME.

A couple of the applications that make up the square-rigged KME sail are:



ABMS - The tool used to develop the \$1B dollar plus ammunition budget is the Ammunition Budget Management System (ABMS). The Ammunition Programs and Budget Division (AP&BD) of PM-Ammo is responsible for planning, budgeting and executing the Marine Corps ammunition programs. There are three budgets in a budget cycle, Navy Comptroller (NAVCOMPT), Office of the Secretary of Defense (OSD), and the Presidential Budget (PRESBUD). Originally under development in the early 1990's, ABMS was in essence not thoroughly done but was a 'cripple ware' for many years and resided on a Windows 95 machine. It was resurrected and after a year of development produced a solution accessible through designated users on the KMP.

EQual - Marine Corps Electronic Ammunitions and Explosive Qualification & Certification Program (EQual). This is an application almost ready for prime time. By using this feature individual Marines will be able to lookup their Ammo Training Record on KMP. The Ammo Training Record contains information on training events, certification levels and operator permits. Additionally, EQual supports the administrative and management requirements as defined by MC 8023.3A.



ULAS - Unit Level Ammunition Status (ULAS) was a proof of concept funded by the Department of the Navy (DON) eBusiness Operations office.

MAARS - Marine Ammunition Accounting and Reporting System (MAARS) is the current system used by the Inventory Control Point (ICP) as is considered

the Supply Class V (W)/ground ammunition total item property record. MAARS is a true legacy system that is in a sustainment mode as we move towards transitioning to Ordnance Information System (OIS) – Wholesale during this FY.

ROLMS - Retail Ordnance Logistics Management System (ROLMS) is the current system in place at the Naval retail storage sites and is considered the accountable record. ROLMS' functionality is scheduled to be integrated into OIS in the coming years as we move towards one totally integrated Naval system for supply Class V.

We strive to have a six-week release of 'fresh meat', normally its four weeks, so it is important to take time and always check the Resource links as they are continually being updated within the Alphabetical Directory on the KMP Home Page. A list of most recent updates can also be found on the KMP home page by viewing the Data Source section and referencing the "As Of" date. Also check out Muzzle Velocity Adjustments (Propellant Efficiencies) at the Lot Level, now on the KMP. We also recommend review of our Web Site, especially as we post 'News you can Use' – a section of fresh meat not yet categorized but posted to reveal to our community.

- Vol 1, No 1 Ammunition Management Systems Update
- Vol 2, No 2 Marine Corps Retail Ammunition Management System
- Vol 4, No 1 ROLMS is coming to Ammunition Inventory Control
- Vol 5, No 4 ROLMS goes to Cobra Gold
- Vol 7, No 4 Ammunition Information Systems
- Vol 8, No 1 Ordnance Information System
- Vol 8, No 4 PM AMMO Releases KMP Phase II
- Vol 9, No 1 Enhanced ROLMS functionality for MPF
- Vol 9, No 1 ROLMS "Outside the Box"
- Vol 9, No 3 Ammunition Knowledge Management Portal
- Vol 9, No 3 Generation Z
- Vol 9, No 3 Goodbye MAARS, Hello OIS

System of Systems, its how we approach each challenge and our entire team strives to make the business of eAmmo simplified and timely.

Mr. Zarnesky is currently assigned to PM-Ammo, as Head of Inventory Management & Systems Division and may be reached at DSN: 378-3129, e-mail: ZarneskyDG@mcsc.usmc.mil

5.56MM Terminal Ballistic Assessment

Captain Young and Mr. Allred of the MCSC-PM Ammo-IWA Team

During the first quarter of FY02, the Marine Corps Systems Command, responding to 5.56mm ineffectiveness issues, specifically with respect to close quarters battle (CQB) mission scenarios, being reported by U.S. Army deployed units. A team of small arms experts were called in to conduct a terminal ballistic assessment to ascertain if these effectiveness issues could be substantiated. Further, to perform a side-by-side comparison of 5.56mm cartridges to determine if there was a more viable and effective round of ammunition currently available in the commercial arena. Members of the team were brought in from the Program Manager for Ammunition, the Program Manager for Infantry Weapons, the Precision Weapons Section of the Weapons Training Battalion and the Federal Bureau of Investigation.

Currently there are literally dozens of different configurations of 5.56mm cartridges manufactured by several different small arms companies. Due to a short response time and funding constraints, evaluating each and every different configuration was physically and financially impossible. However, an initial assessment was made looking at this vast diversity of 5.56mm ammunition. The assessment centered on utilizing common sense "ballistic" judgment and applying the restrictions of the "Laws of War". From this initial assessment, it was determined that three cartridges were to be evaluated: the current 62gr. M855 (DODIC: A059), the environmentally friendly 62gr. M855 (DODIC: AA48) and the 77gr. Black Hills Nosler (noted in this article as BLH2). No other cartridges were identified that met the above criteria as an acceptable asset based on the evaluation criteria. Once the cartridges were selected for evaluations, the test parameters for terminal ballistics were set to simulate CQB, military operation in urban terrain (MOUT), closed terrain and open terrain (10, 50, 100 and 300m respectively). Additionally, accuracy was evaluated at 300m. All testing was performed in both the M4A1 and the M16A2 to observe any differences in terminal ballistic effectiveness and/or accuracy between the two weapons.

Terminal Ballistics. The terminal ballistic evaluation was conducted by firing five (5) rounds of each 5.56mm cartridge, at each range, into a block of 10% ballistic gelatin. The 10% ballistic gelatin block is an industry standard for gauging the performance of a projectile. It is a homogeneous medium and does not simulate the diverse make up of a human body; it is merely a gauge. Upon the completion of each firing, the block of ballistic gelatin was sliced to determine the point of initial yaw of the projectile and the volume of the cavity produced. Although, as mentioned above, the gelatin block does not represent the human body, two (2) nominal body thickness' were superimposed on the data to aid in the representation of a thin, malnourished (7.3" torso) and a thicker, healthier (9.0" torso) individual. From the data gathered during this portion of the evaluation, the BLH2 77-gr. projectile consistently outperformed the A059 and AA48. A more general assessment of the raw data showed that all although in a significant amount of the test firings the A059 and AA48 developed a larger cavity within the gelatin block; most of these cavities were developed at significantly longer distances from the initial point of impact. This late cavity development indicates that the majority of the damage would have occurred external to the intended target dimensions. Conversely, the BLH2 projectile cavity was developed very early where the majority the damage would be internal within the intended target. For example: the BLH2 projectile developed it's cavity earliest, then the A059, and lastly the AA48 developed it's cavity very late in the ballistic gelatin block. Analogy is that the earlier the yaw and cavity development, the greater the damage within the target. A test sample of the results of a 5.56mm ballistic gelatin block firing is shown in Figure 1 below.

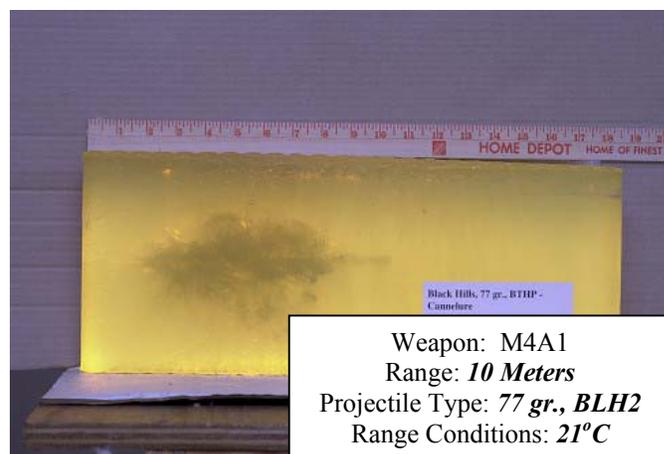


Figure 1

Accuracy. The accuracy portion of this evaluation was conducted utilizing three (3) rifles of each configuration of weapon type; M4A1 and M16A2. Three (3) ten shot groups of each type were fired from both rifles (M16/M4) out to a range of 300m. Additionally, this test was performed with ammunition conditioned to temperatures of -25, +21(nominal) and +120oC. The combination of multiple weapons and temperature extremes allowed for a comprehensive system accuracy evaluation. The compiled accuracy evaluation of all test groups is provided in Table 2. Note that for both weapons types, the BLH2 cartridge out performed both the A059 and AA48. A graphic representation of the accuracy comparison of this evaluation is also shown in Figures 2 and 3 for the M4A1 and M16A2 respectively. Note that the accuracy of the A059 and its future possible replacement, the environmentally friendly AA48 are nearly identical. This is to be expected if the internal and external ballistic characteristics of the AA48 were designed properly.

achieving the desired effect, would not have the instantaneous incapacitation effect required; time to incapacitation being extremely critical for such short range operations. It was hypothesized from the ballistic data that the BLH2 cartridge would reduce the overall critical time to incapacitation, in comparison to the A059 and AA48; however, instant incapacitation would not be achieved for the majority of target impacts.

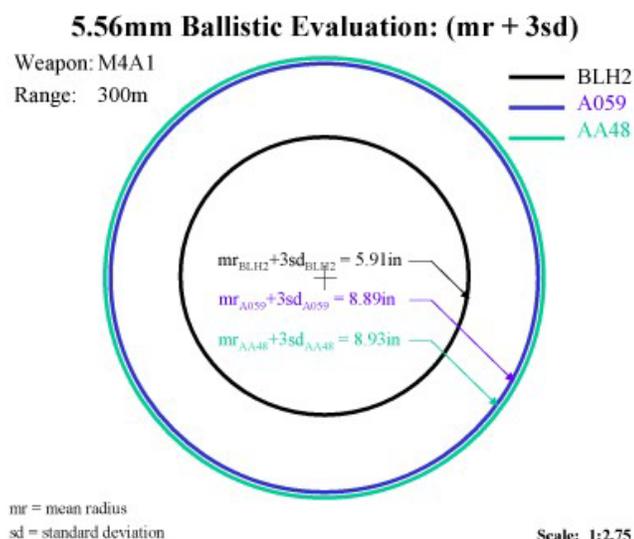


FIGURE 2: M4A1 Accuracy Graphical Depiction

Follow-On Evaluations. Upon completion of the 5.56mm terminal ballistic assessment, additional evaluation took place on the test data. This additional evaluation not only added the expertise of Army and Navy small arms professionals to the Marine Corps/FBI team, but also added the forensic expertise of noted medical personnel. It was the consensus of this comprehensive team that all 5.56mm cartridges evaluated performed adequately for the broad spectrum of possible targets that the cartridges were designed to defeat, within the criterion of the “Laws of War”. However, it was also noted, that within the short CQB range scenario, these cartridges, while ultimately

5.56mm Ballistic Evaluation: (mr+3sd)

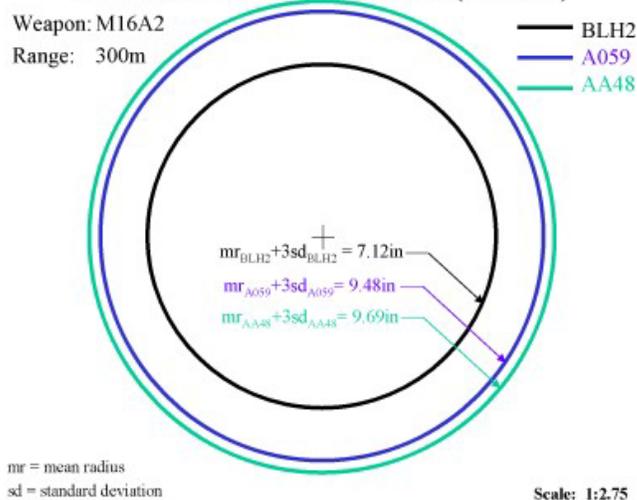


FIGURE 3: M16A2 Accuracy Graphical Depiction

USMC Lessons Learned White Papers. Several USMC Lessons Learned White Papers have been generated by conducting interviews with a broad spectrum of units returning from a deployed status. In each case, 5.56mm M855 was given good marks in its effectiveness when fired from the M4A1 and M16A2 rifles. No unfavorable comments were noted with respect to the accuracy or terminal effectiveness of the 5.56mm M855 cartridge.

Ammunition Cost Evaluation. A final assessment for this evaluation was the reality of cost. This is especially critical if the ultimate intent was to replace the entire inventory of M855 (A059; Note: AA48 is not currently available) with BLH2 77-gr. Black Hills Nosler. In FY02 dollars, the BLH2 is 138% and 32% more expensive than the A059 and AA48, respectively. This dramatic increase in unit cost makes it extremely cost ineffective, at this time, to retrofit the entire USMC 5.56MM inventory to address an issue that has not been highlighted as a problem by the Forces.

Course(s) of Action (CoA) Pursued. The USMC has pursued two main CoAs on the terminal ballistic assessment discussed within this article:

(1) Continue to procure M855 (A059 & AA48) as the primary 5.56mm cartridge to support USMC Forces.

(2) Procure and provide BLH2 77-gr. ammunition to support deployed units outfitted with M4A1 to address the immediate need for an increase in incapacitation for CQB mission.

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Acquisition 101

Captain Young, MCSC-PM Ammo-IWA Team

What if I told you acquisition of ammunition starts with Ricky Recon picking up the latest edition of Guns & Ammo? Many in our field would disagree claiming there is much more to it than that. And they would be correct; there are many moving parts to buying ammunition and explosives. But for the most part, it starts with someone seeing something they need to accomplish their mission.

Case in point, in 1992 when Marines went into Somalia in support of Operation Restore Hope, operations quickly turned from humanitarian to quelling civil disturbances and much more. Minus lethal means, Marines were not equipped to deal with aggressive crowds in a less than lethal manner. This generated a need for non-lethal ammunition and the rest is acquisition history. Our Ammunition Supply Points (ASPs) are now loaded with many different types of non-lethal ammunition for several different types of weapons.

Buying ammunition is one of the least discussed subjects in our community and that's because only a handful of ammunition officer's get orders to PM Ammo to be an Assistant Program Manager (APM). There is no training or billets that prepare a Marine for acquisition. It's not uncommon to have a new APM walk around with a blank stare for the first two years. It's also not uncommon for the blank stare to continue for their entire tour... like Capt Young.... ha!). It's during that third year when they start to make sound business decisions when it comes to buying ammunition for the Marine Corps. With formal training and two

years of experience in an acquisition billet, you can gain a secondary in one of the Military Occupational Skills*:

Acquisition Professional Candidate (9957)

Acquisition Management Officers (9958)

Acquisition Managers (9959)

*Limited Duty and Warrant Officer's are not eligible. Title 10 Restrictions.

Make no mistake; my attempt at simplifying the process for young Marines in Ammunition Companies and Victor units doesn't change the fact that this is by far the hardest assignment in my 22-year career. But instead of me throwing out acronyms and quoting Acquisition Regulations, I thought I would give you a very generic interpretation of the process.

Believe it or not, my opening statement is not very far from the truth. The most common question I get from Marines in the field is, "How can I get my hands on some of that new high speed ammo I've heard or read about". For the most part, my response is the same for all inquiries; you need to submit a Universal Need Statement (UNS) or a Mission Need Statement (MNS). These are the basic "work requests" that any Marine can submit via their chain of command, to the Marine Corps Combat Development Command (MCCDC) for review. At MCCDC, the requests are screened and validated based on two factors. The first is verifying that no existing alternative(s) are already fielded and second, mission need. Most of the time requests are not approved due to the fact that alternatives are already available. Normally, for routine statements, the validation can take up to a year. With urgent needs, as in the case of Operation Restore Hope, validation and fielding happens within a few months. For more information on submitting an UNS or MNS you can visit the MCCDC website at www.mccdc.usmc.mil

That's the easy part. Contrary to what many people believe, there is not an endless supply of money to buy ammo. Advocates at MCCDC for new programs are tasked with getting money to fund the efforts. That's what is supposed to happen, sometimes, however, requirements are established with no additional funding and an APM is forced to move funding from existing programs to cover new initiatives until additional funding is put into their budget.

Once funding is obtained, the APM starts to work with resident engineers and government testing activities to develop a specification to meet our needs. With that specification, we open it up to commercial

industry to submit samples to be used in a down select to obtain the best round of ammunition. Using the down select process fuels competition between manufacturers, which increases quality and decreases cost. Final selection is based on performance, schedule, cost and the vendor's production capability. Once a round is selected, it is subjected to testing that duplicates extreme handling, storage and environmental conditions that ammunition may be exposed to in the field. In addition to these specifications, are also cataloging, safety board and legal reviews required before contract award. Once all of this has been accomplished, the manufacturer goes into production and the product is delivered between 13 and 24 months.

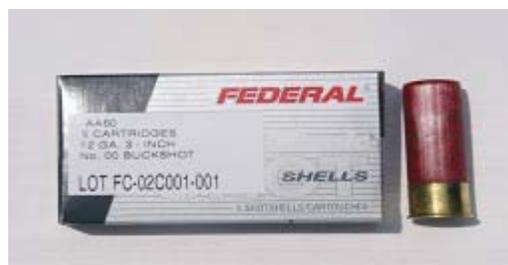
NEW PRODUCT/IMPROVEMENTS

The following are new and/or improved products that have been fielded since I assumed the duty as APM for Small Arms and Non-Lethals:

AA40 5.56mm Frangible - Currently this cartridge is being produced by Federal Cartridge Company to replace the Winchester Ranger Cartridge. The profile of the new cartridge resembles that of the M855, unlike the blunt nose of the Ranger cartridge, which was linked to weapon stoppages during feeding. The projectile composition also reduces wear and tear on shooting house walls by increasing frangibility upon impact.



AA60 3" 00 Buckshot - Procured to replace A011 2¾" Shotshell. The number of shot pellets increased from 9 to 13 improving lethality. The new cartridge was fielded to accommodate the M1014 but is compatible with all shotguns in the inventory.



AA67 77-grain 5.56mm Moly Coated – Procured solely for the Competition in Arms Program being fired from M16 National Match Rifles.



12-Gauge Non-Lethal Rubber Ball Grenade Launching System - The Weapons System Explosive Safety Review Board is currently reviewing the shotgun Launch Cup and Non Lethal Grenades.



The Launch Cup is designed to be fitted on the Mossberg 500A2. The NL practice grenade (GG05) and fuze (G874) have been resigned with reverse threads and new safety clips. Both will receive new DODIC's, GG13 & GG14 respectively. Full production scheduled to begin late first quarter FY04.



There you have it, the simple process of acquisition. There are a few things I didn't address that are also required to buy ammo but I felt that if I got to far into the weeds readers would move on to the next article. If I have peaked your interest in acquisition, I will gladly discuss other related topics such as, The Budgeting Process, POM Process, POM Submissions, APM Budget Formulation Tasks, Asset Dynamics, Acquisition Objectives, Tracking POM Initiatives/Submissions through POM cycle, Principal Steps of the PPBS Process, Ammunition Management Budgeting System, or Acquisition Categories/Milestone Decision via email.

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Industry In The Spotlight

Captain Young, MCSC-PM Ammo-IWA Team and Mr. Tibbets, Alliant Techsystems

This is the first article of a series that spotlight ammunition and explosive manufacturers in North America that support the U.S. Marine Corps.

Lake City Army Ammunition Plant (LCAAP) located at Independence, Missouri, is the largest small arms (5.56 - 20 mm) ammunition manufacturing plant in the world. With the exception of the five-year period between the end of World War II and the beginning of the Korean conflict, this government-owned, contractor-operated facility has been in continuous production since October 1941.



Lake City AAP is within the city limits of Independence, MO, on the eastern edge of the Greater Kansas City metropolitan area. It encompasses 458 buildings on 3,935 acres and has approximately 1,800 employees working three shifts to keep up with demand.

Lake City AAP manufactures and proof-tests small arms ammunition. The plant was opened in 1941 and operated by Remington Arms Company, Inc. from 1941 through 1985 (except for the non-production years). From September 1941 to August 1945 the plant produced more than 5.7 billion cartridges. It was placed in standby status in December 1945 but was reactivated in 1950, again to produce small caliber arms ammunition. It stayed in operation after the Korean War and again expanded during the Vietnam War, producing 14.4 billion cartridges between 1965 and 1973. In the 1970s the facilities and production systems were upgraded. In 1985, Olin Corporation won a bid to operate the plant and continued to do so until 1999.



Millions of 5.56MM Projectiles

On July 30, 1999, Alliant Techsystems (ATK) was selected to operate LCAAP and supply the services requirements for small caliber ammunition over the next 10 years. ATK, the largest supplier of small caliber ammunition to the DoD, began management of LCAAP on April 3, 2000 and production of 350 million rounds annually.

This year, ATK will produce approximately 1.2 billion rounds of small-caliber ammunition, and associated links, at LCAAP, including 5.56mm, 7.62mm, .30 caliber, and .50 caliber cartridges in direct support of replenishing the ammunition stockpile and satisfying increased training requirements.

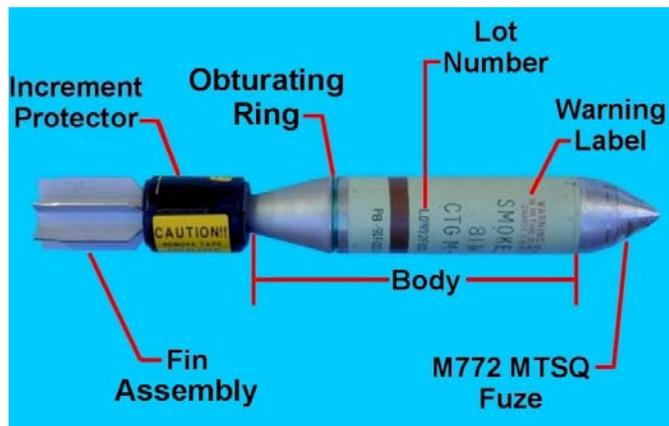
Captain Young is currently assigned to the MCSC-PM Ammo-IWA Team and Mr. Tibbets is the VP of Business Development for Alliant Techsystems (ATK)

81mm M819 (DODIC C870) Red Phosphorus Replacement Effort

Mr. Miller, MCSC-PM Ammo-IWA Team

The Marine Corps has initiated an effort to replace the red phosphorus in the 81mm M819 (RP) mortar cartridge. The current Marine Corps stockpile of C870 was suspended for emergency combat use only (condition code "N") following two potentially serious problems; the out-gassing of phosphine and the auto-ignition of a cartridge in a test chamber. Two

Ammunition Information Notices (AIN's) have been published in the past year outlining precautions to be taken when handling, transporting or utilizing these cartridges. (The most recent AIN is #026-03).



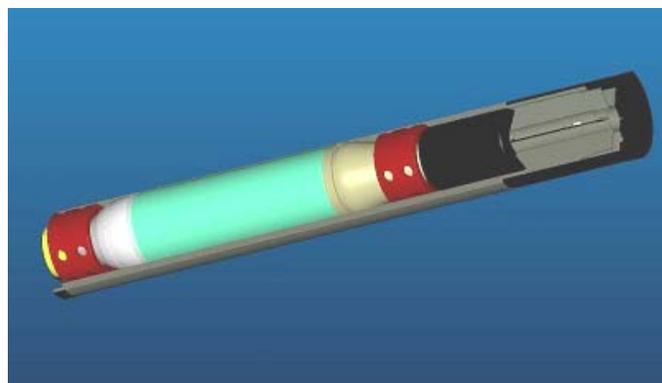
C870 without GAM's

The Army Research, Development, and Engineering Center (ARDEC) conducted a short-term measure to absorb the phosphine by placing Gas Absorbent Modules (GAM's) inside the containers.



Gas Absorbent Modules (GAM's)

The cost effectiveness and environmental impact of using the GAM's is currently being reviewed by the Marine Corps and, if implemented, will be performed on post-1995 lots in the existing stockpile via a maintenance effort. However, a long-term solution is desired in order to resolve the problem at the source: the red phosphorus itself.



C870 with inserted GAM's

Material suppliers have addressed phosphine generation and pyrotechnic composition stability issues of RP for many years. Numerous companies have experimented with various compositions and manufacturing techniques in attempts to significantly reduce the levels of phosphine generated when moisture and/or oxygen reaches the surface of the RP pellets. The most promising technology currently on the market is a microencapsulated grade of RP. This technology applies a microencapsulation coating to the RP, which must then be protected during the processing steps (blending, granulation and consolidation).



Marines in action with RP

The Marine Corps is currently coordinating with two manufacturers of RP, Pine Bluff Arsenal and the

Naval Surface Warfare Center, Crane Division in an effort to evaluate the use of encapsulated RP in the M819 mortar cartridge. This effort involves an initial evaluation of the RP mixes for phosphine out-gassing; performance testing (duration and density) of the smoke; product ability in the M819 cartridge (ability to withstand the loading processes); performance testing during actual firing; and a shelf life assessment (measure of phosphine out-gassing in storage).

The solution to the phosphine out-gassing problem (and the related auto-ignition potential) is critical to the future production and continued use of RP by the Marine Corps. Screening smoke is critical to combat operations and RP is the best-known source of that capability. However, safety in the storage, transportation and use of the ammunition is also critical to successful combat operations. Therefore, the Marine Corps will continue to be instrumental in the effort to identify a source of RP that meets the performance, safety and environmental requirements.

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Direct Support - Mobile Loaded FASP

CWO2 Eric T. Howe, Storage OIC at the Las Pulgas Magazine Area at Camp Pendleton

This article will discuss the way the only Marine Corps Field Ammunition Supply Point operated during Phase IV operations in Iraq. A single FASP supported the entire I MEF area of operations in Iraq from 01 June through 25 September 2003. Combat Service Support Company (CSSC) 101 was created in May out of members of Combat Service Support Group (CSSG) 11, and Combat Service Support Battalion (CSSB) 10. It was established to continue the direct support mission to the 1st Marine Division after CSSB-10 returned to Kuwait to assist in R3 operations. It was smaller than CSSB-10 who had the DS role for the war.

The table of organization for the Ammunition Detachment consisted of one Marine Officer (2340), and nine Ammunition Technicians (2311s). Its mission was direct support to nine battalions, a MEF HQ group and the numerous Explosive Ordnance Disposal Teams spread throughout Iraq. The Ammunition Detachment

also provided ammunition support to an Air Wing, and several Army military police units that were working side by side with Marines.

Due to lack of space and security constraints in Ad-Diwaniyah, a mobile loaded FASP was designed. This FASP was drastically different than the larger CSSB-10 mobile FASP during the initial phases of Operation Iraqi Freedom. Only necessary ammunition items were held. These included small arms, crew served ammunition, AT-4s, pyrotechnics, and a vast amount of demolition material. The table of equipment was significantly smaller using eight MTRV seven-ton trucks, with 105 trailers.

The mobile loaded FASP was set up utilizing the Basic Load Ammunition Holding Area (BLAHA) concept that is described in NAVSEA OP 5 Volume 3. The explosive quantity limit could not be kept under the 8820-pound N.E.W. requirement. The Area Commander of the sector was notified that a perfect FASP could not be established with the amount of space that was allocated. The ESQD criterion was deviated from, with the commander's approval.

To mitigate the risk of fire or explosion, several safety factors were utilized to ensure the safety of the ammunition:

- a. Camouflage netting was used to cover trucks and trailers to keep the direct rays of the sun from deteriorating the ammunition. This also helped to reduce the ambient temperature.
- b. Portable Hesco Barriers were used as barriers to separate the trucks; these barriers were filled with dirt and sand.
- c. A 4-6 foot berm was established around the perimeter of the FAS P area. It was impossible to build a larger berm due to the water table.
- d. Outside of the berms, triple strands of concertina wire were erected.
- e. Entire area was covered by a 24 hour post with two 2311s, and a .50 caliber machine gun.
- f. Iraqi portable fire extinguishers were appropriated and placed in front of each vehicle.
- g. 55-gallon drums were placed through out the FASP with water and sand; as well as empty buckets, and shovels.

A generator with lights was placed in the parking area to assist with nighttime operations. To mitigate the sound and any possible sparks, a sand bag wall was established surrounding the generator. Due to

enemy sniper, and rocket propelled grenade attacks, a large bunker was constructed for the safety of the ammunition detachment.

Phase IV operations were different for Ammunition Technicians in that we delivered ammunition twenty four hours a day, and seven days a week. Division units needing ammunition would send a rapid request to the CSSG-11 and CSSC-101 SYSCOCs via SIPR NET. Upon receipt of the rapid request, the ammunition would be pulled, and placed on empty vehicles. Military police escorts and crew served weapon systems on the ammunition trucks were utilized for route security. Ammunition was enroute to the requesting battalion within hours. This type of service was above and beyond most expectations of both Division and the Force Service Support Group (FSSG). Supporting the Division without question helped develop bonds with all the battalion S-4s and ammunition chiefs.

For the period of four months, CSSC-101 Ammunition Detachment issued more than 250 short tons of ammunition in support of Phase IV Operations in the 1st Marine Division TAOR. As each city/battalion was getting relieved in place by the international coalition division, the individual units were responsible to transport their own ammunition to TAA FOX ASP in Kuwait. The CSSC-101 Ammunition Detachment OIC would notify the SPMAGTF Ammunition OIC as each battalion was ready to get relieved in place, as to which unit, and how many short tons were enroute. This helped the SPMAGTF plan for turn-ins.

The mobile loaded FASP supported 22 units and issued ammunition 381 times, and received 366 turn-ins. All this work was conducted by 10 Marines. These same 10 Marines drove their own 7 ton-MTVRs, and provided twenty-four hour security for the FASP. This displayed the true versatility of our ammo techs.

Reasons why this support was positive:

- Supported Division with the exact items that they needed.
- Gave the Division unparalleled rapid support.
- Demonstrated the versatility of an Ammunition Platoon (-).
- Made ammo techs think about safety, and ESQD requirements, as well as trained them in current combat operations.

This article is dedicated to the ammunition technicians from CSSC-101, thank you for your total dedication and professionalism.

CWO2 Howe was the CSSG-11 Ammunition Officer from December 2002-October 2003. He also served as the CSSC-101 Ammunition Detachment Commander from 30 May – 30 September 2003. Currently he is assigned as the Storage OIC at the Las Pulgas Magazine Area at Camp Pendleton California and can be reached by e-mail at: Howeet@1fssg.usmc.mil

40mm High Explosive Dual Purpose (HEDP) Cartridge Foreign Comparative Test (FCT) Program

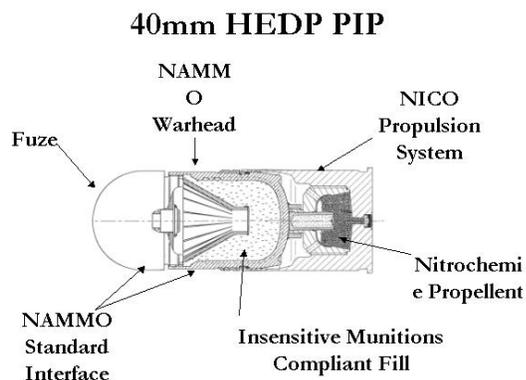
Mr. Miller, MCSC-PM Ammo-IWA Team

The Marine Corps recently received funding from the Office of the Secretary of Defense (OSD) to execute a Foreign Comparative Test (FCT) program on a 40mm High Explosive Dual Purpose cartridge.

The existing M430 HEDP cartridge (DODIC B542) used in the Mk19, Mod 0 Grenade Machine Gun (GMG) was developed and fielded in the mid-1980's. It does not meet the current Insensitive Munitions (IM) requirements; it was fielded without certification of the Weapon System Explosives Safety Review Board (WSESERB) based on operational necessity; its dispersion characteristics are less than satisfactory; and it has a long history of safety-related malfunctions.

Over the past few years several technology advances have been achieved in 40mm high velocity ammunition. The US Special Operations Command (USSOCOM) has fielded a new cartridge for use in the Mk47 Advanced Lightweight Grenade Launcher (ALGL); the Marine Corps has fielded a new target practice cartridge for use in the Mk19 GMG; more IM-compliant energetics have been developed; and new propellant technology has surfaced. This FCT program is designed to take advantage of this technology through

a joint integration effort between USSOCOM and the Marine Corps.



The technology being evaluated includes the following non-developmental components:

- A fuze currently used in the Pre-fragmented Programmable High Explosive (PPHE) cartridge developed by NAMMO, the Nordic Ammunition Company located in Raufoss, Norway. The fuze is programmable for use in the Mk47 and defaults to point detonating for use in the Mk19 GMG. Both fuze settings feature a self-destruct mechanism that will eliminate the incidents of duds on training ranges.
- A propulsion system currently developed by Nico Pyrotechnik, located in Trittau, Germany. This propulsion system is currently in use in the Mk281, Mod 0 Target Practice (TP) cartridge (DODIC BA12) in the Mk19 GMG. This propulsion system has proven to be more accurate than the existing M430 HEDP cartridge.
- A propellant developed by Nitrochemie, located in Wimmis, Switzerland. The Swiss technology has produced a family of propellants that are cleaner burning, better performing and are more Insensitive Munitions (IM) compliant. This "extruded impregnated (EI)" propellant technology is currently used in the PPHE cartridge and is under consideration for use in several other ammunition items.
- A HEDP warhead (also developed by NAMMO) that features a behind armor incendiary effect and employs a more IM-compliant explosive fill.

This FCT effort is expected to take two years to complete. The first year will focus on conducting integration efforts on the technology. An additional year will be required in order to conduct the MIL-STD

2105B testing and to qualify the cartridge for use. This is a "test-to-procure" effort with production and fielding scheduled for FY06.

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GES, the Next Revolution You Won't Notice...

Mr. Banks, CWO-4, USMC (Retired)

This article is not about our collective ammunition business. Blasphemy!, you say. Not so, say I. But, I believe the subject matter is just as important as what we do in our daily routines, and is substantially more complex. In the beginning, it may not appear to have any direct connection to what we do every day. By the end, though, it should provoke some thoughts about how it can be applied to our ammunition operations. The subject is, simply, information, and how we share it.

Enter, the Global Information Grid Enterprise Services (GES).

The GES is a Defense Information Systems Agency (DISA) initiative to fundamentally change the way we collect, process, and share information in support of military operations. The GES is not a system in and of itself. Nor is it a collection of systems, although many systems will participate in the GES. Rather, it is a set of methods, tools, and philosophies that will maximize the potential of existing systems, and help shape the design of future information systems. But how will the GES do that?

Let's begin the discussion by stating a basic premise: we all wear (or wore) the uniform, understanding that our sole purpose in uniformed service is to support that 0311 Lance Corporal that is out in front. It doesn't matter if you're an ammunition technician, a jet driver, a tank gunner, an administration person, or a General. One man is on "point" -- the rest are in trace, providing whatever support that young rifleman needs.

Well now, that was easy enough to say. But, how do we do that? How do we manage and coordinate all the complexities that go into putting an MRE in his cargo pocket; ammunition in his weapon; a route to patrol; understanding of his environment and the tactical objectives; and, how to request other support, when required?

For thirty years in this information technology age, we have built ever larger, and ever more complex information systems. As our capacity to manage and store more information has grown, so have our demands for yet more information, until we are submerged, and can no longer act effectively on what the information is telling us. For one thing, we probably don't get the information in a timely manner. For another, there's way too much of it. And for yet another, just because it looked good at the processing point when we pushed it out to the user, that doesn't necessarily make it what the commander needs to operate effectively.

The process just described is known as Task-Process-Exploit-Disseminate, or TPED. The information technologies of the 1980s and 1990s were designed around just that line of thought. Data would be collected from a multitude of sources, it would be centrally processed through a defined structure of filters, and the resulting data then examined for its value (a subjective term). The final step would be to disseminate this information to users, generally as canned reports or screen views. You only saw the data the way the designer decided to show it to you.

Arguably, some information is ideally suited to this kind of approach, like malfunctions that result in a Notice of Ammunition Reclassification (NAR). Data (task) from one agency is communicated to the "system" (process), where it is analyzed (exploit) to make sure it's understood, and directed actions are published (disseminate) by Naval message to all users of that item. Given good circumstances, the system can respond to this need within a few hours. In less than 24 hours, the potential for another malfunction of this type has been greatly reduced.

The type and quality of the information required by a combatant commander and his subordinate forces are substantially different, however. Intelligence regarding the enemy order of battle and disposition of forces is critical information. Awareness of friendly force dispositions and their logistics state is also critical. Yet, the current systems and approaches almost guarantee that the data available to that commander may

be hours, or even days, old. As information ages, its relevance decreases. The manner of presentation of the data to the commander may not have the information that he perceives he needs, and it may also mask what is important. In order to establish and maintain information superiority, as required under the CJCS' Joint Vision 2020, the commander needs a fresh approach to sharing of information.

At this point, a technical article might next launch into a discussion of Web services, metadata, object technologies, XML/SOAP, and a host of other exotic descriptors. I won't – makes my head hurt. But we do have to discuss the GES.

Simply stated, the GES will allow a transformation from a TPED-type of information environment to one that is expressed as Task-Post-Process-Use (TPPU). The concept can be further synthesized down by saying it will give users the capability to, "...access whatever they want, whenever they want, from wherever they are and perform the access actions securely".

That's a pretty significant change. Instead of addressing the need for information with centrally managed, client-server systems, the focus of information processing becomes the small devices used by the small operating force units. (Also called "edge" devices, since they are on the edge of the information envelope.) Instead of the strategic (or national) customer driving the information systems, the end-users who actually need and collect the information will drive the information systems used by commanders at all levels. In short, it becomes "pull", rather than "push".

By definition, such an enterprise-wide approach will be "open"; that is, it cannot be developed with proprietary standards. It will also force a complete re-thinking of how we qualify data, distinguishing between classified and unclassified. This element will drive the Information Security and Information Assurance communities crazy, partly because it's technically hard to do, and partly because it's a fundamental change in the way we've treated information for the past 50 years. The GES approach will also introduce a multitude of different devices used as "edge devices"; but few will be proprietary (like Blackberry, or Palm). And, one of the biggest challenges to be faced will be bandwidth demand.

During the dot-com boom of the late 1990s, several companies made huge investments in deploying

fiber optic capacity across the United States and elsewhere in the world. By the end of the year 2001 in the US alone, the capacity of the infrastructure (the amount of bandwidth that could be effectively used) increased by 400 times over what was available in 1999.

In military operations, bandwidth as a commodity is substantially more constrained. Because of the mobility inherent in military operations, it's substantially more challenging to grow bandwidth at the exponential rate as was done in the private sector. While growing capacity that is managed by hardware on the ground, it will be necessary to exploit satellite communications much more aggressively, and to insert autonomous bandwidth management technologies into the current systems, where feasible. One aspect of this management is "bandwidth-on-demand", where bandwidth is allocated and prioritized according to need. If your unit has low-priority traffic, the management system automatically allocates little or no bandwidth, and you wait. High priority traffic might get the whole pipe, to ensure that the data remain timely, and relevant. PowerPoint rangers, rejoice!

All of these management actions would be taking place automatically, in milliseconds or even microseconds, so in a great number of cases, even the small units wouldn't notice any significant change in their ability to report.

So, is it going to happen anytime soon? Well, yes and no. It will take many years to realize all the benefits that this approach can bring, and significant investment. But, like the desktop and laptop computer revolution of the 1990s, where there weren't any major events – nothing changed, and yet, everything changed; the computers and the tools and capabilities they provided just became part of our everyday lives, until we couldn't continue without them. So it will be with the GES. From a conceptual approach today, to one that is part of our everyday work, absolutely essential and unthinkable to be without, it will be the quiet revolution of the first decade of this century.

It will come, and most of us won't even know it happened. Enjoy the ride.

Mr. Banks, CWO-4, USMC (Retired)



Perspective of Reserve Activation from Active and Reserve 2311 Marines

Manager Course 003-03

The mission of the reserve ammo unit is to provide "General Support" of ammunition to the operating forces once mobilized for a contingency. The calls came in mid-January and early February in support of Operation Enduring Freedom. The three ammo reserve units deployed to Camp Pendleton and Camp Lejeune as well as the Middle East. Topeka went primarily to Los Pulgas ASP Camp Pendleton, Greenville to Camp Lejeune ASP, and Rome went forward. These are our thoughts, views, and opinions of the activation both from the active and reserve points of views.

Lessons Learned:

-Training is the key to successful activations. We have to continue to get hands on training during our two week AT's. Incorporate more training for reservist to train at Active Duty, Ammunition Supply Points. This will give more insight on the day-to-day operations in an ASP. This will also reduce the "fog of war" when the flag goes up. As a reservist the primary focus is FASP's. This is done in preparation for the required annual training (2 weeks for CAX, FIREX, etc.) The majority of the Marines activated had not worked in an ASP. In the future, more emphasis needs to be placed on ASP procedures if Reservists will be used to back fill in future operations.

-More time and better planning for a turnover, Active Duty left in a hurry—there is a need to prepare for war by planning on a turnover. A more realistic turnover timeline is essential for uninterrupted flow of ammo. Meaning send them in phases if at all possible (half of active duty to AOR, half reserve to fill in at ASP's) to ensure that operational responsibilities are still being satisfied. This idea could be implemented by an advance party or an earlier activation. A minimum of one or two weeks would facilitate this.

-Provide an initial briefing to all personnel prior to the commencement of work. This brief will be from the Operations Chief and the Section Chief. This will ensure that the Marines are on track with what needs to be accomplished and how it is supposed to be accomplished. This will cut down on safety violations, unnecessary work, and decrease the workload.

-Enforce a monthly review of sectional SOP's. This will help guide anyone whether internal or external personnel are placed in that section.

- Mission accomplishment, Marines get it done! Regardless of their status Reservists are Marines and Marines get it done. Their level of education and diverse backgrounds provide for a high level of performance.

- Chain of command clarification for both active and reserve personnel. Camp Lejeune experienced similar challenges, as did Camp Pendleton, such as who belonged to whom and who reports to whom. Administration of pay, leave, NJP, travel pay, promotions were all problematic. Not only the confusion of who to submit paper work to but how as well.



Focus at the reserve centers:

-ROLMS training and Records training. Very few Marines being activated knew ROLMS or Records section. This is a key area to ASP's and reservists came under prepared, as a whole.

-Need more qualified MHE operations. Never enough Marine drivers, who are properly licensed, qualified and prepared to move munitions. On numerous occasions we had to rely on civilians or wait on Marine operators. This adversely effected operations causing undue delays and longer workdays. In addition to some potential safety issues.

-Updated Pubs for training. Refresher training is needed on the pubs as to the annual changes and what reference

to use. Reservists need to be current on the latest ammo regulations, requirements and changes.

-Need training aids i.e. dummy rounds and films, boxes. Need identification of ammunition and explosives training.

-The preparation of extended active duty i.e. financial planning, family planning. Some Marines were not prepared for the financial hardships that come with taking, in some cases, significant pay cuts. This placed undue hardships on relationship, individual stress and distractions from the mission.

-I&I Staff need to work more integrated with reserve Marines. This means more of them deploying with the Reservist and working as a unit.

-No need to reinvent the wheel. Reserves need to follow the same training standards as active duty. Active duty needs to communicate Marine Corps wide on SOP's and training standards. An annual ammunition conference might help the continuity.

-More participation in the Manager Course. At this course, active and reserve come together and learn one thing, ammunition and explosives. The same knowledge is being taught to both. This provides more continuity amongst the two.

Summary:

Reservists are playing a much larger part in today's total Marine Force. They are getting more much needed face time necessary to pick up where active forces leave off. Basic 2311 Ammunition Technicians training is generic, for both the Reservist and the Active components. Until the Marines get hands on, the training is transparent. Fortunately with the recent manager course and this year's activation, due to today's world situations, Reservists have been receiving the experience necessary to carry on while active duty Marines are deployed forward. Unfortunately, it was through a lot of bumps and hiccups. All in all we are better trained and more prepared to do battle than ever before. With lessons learned and continual training we will ensure we are prepared for the next one.

This article has been the work of the following Staff Non-Commissioned Officers of Manager Course 003-02: GySgt Darin R. Dodrill, last duty Storage Chief Camp Pendleton, current duty Senior Enlisted

Topeka, Kansas, SSgt Harold Jeans last duty Plt. Sgt Camp Pendleton, current duty Plt. Sgt Topeka, Kansas, SSgt Theron Chaulk, last duty Segs Chief Camp Pendleton, current duty Training Chief Topeka, Kansas, SSgt Donald L. Hoff, current duty IAC Camp Pendleton, SSgt Manuel J. Solorio, current duty Ammo Chief 11th MEU, MSgt Jack Brown last duty Ops Chief Camp Lejeune, current duty Ops Chief Greenville, SC, SSgt John Mobley, last duty Area Supervisor Camp Lejeune, current duty training NCO Greenville, SC, SSgt Christopher L. Deering, current duty Storage Chief Kaneohe Bay, Hawaii, SSgt William L. Corzo, current duty Ammo Chief TBS Quantico, VA.



United States Marine Memorial

The Stork and the Bullet

Mr. Payne, Manager, ASG, Code 4033, NSWC, Crane Indiana

Remember when you where a young child, and Mommy and Daddy all of a sudden showed up at home with a newborn child. They told you that it was your new brother or sister and you wanted to know where it came from. The proverbial answer was that the “Stork” brought it. Well, believe it or not, the “Stork” does not show up one day and dump a bunch of new bullets on your doorstep to be stowed in the magazines at the various Ammunition Supply Points sprinkled throughout the world.

During the late 1980’s, I was the Records Chief at the Ammunition Supply Point, Camp Pendleton, Ca. I recall standing outside and seeing these eighteen-wheelers pull up to the gate. My first thought was that this was a sign that there was more work to do because a delivery was being made. My second thought was, “I wonder where that stuff is coming from”. No, I did not see a “Stork” hovering overhead with a white soft cloth in its mouth and he was not wearing a black hat. You will have to have been around a year or two to remember the commercial with the Stork that wore a black hat.

One the most enjoyable aspects of my job is the opportunities I have to travel throughout the United States and visit the various facilities that produce the ammunition items that we procure or provide Engineering support to for the Program Manager for Ammunition. I have visited the Lake City Army Ammunition Plant, Independence Mo.; the Iowa Army Ammunition Plant, Burlington, Iowa; the Ensign Bickford Plant in Graham Kentucky and the Milan Army Ammunition Plant located in Milan Tennessee to name a few. It is amazing to see these facilities and the quality products they produce for the Marine Corps. But how does the ammunition get from them to the users?

It begins at the Office of the Program Manager for Ammunition in Quantico Virginia. The Assistant Program Manager, (APM), for the specific item creates a Funding Action Request, (FAR). Attached to the FAR is a form that contains various Administrative and Quality Assurance clauses. The form also contains Shipping Instructions. The APM will collaborate with representatives from the Inventory Management Branch at PM Ammo in determining what location to ship the ammunition once produced by the vendor. Under the Shipping Instructions portion of the Form the APM will put in a Shipping Document Number, a Quantity and a Location. For example, let’s say the APM is buying 500,000 AA21’s, through the Acquisition Support Group at Crane, Indiana, and they want all of the rounds to be shipped to Crane for storage. Under “Location” on the form they will put MM7150, which is the Unit Identification Code (UIC) for NSWC, Crane. Or if they want the ammunition to be shipped to the Ammunition Supply Point at Camp Pendleton, California, the APM would put UIC MMCQ50.

The FAR is submitted to the MARCORSSYSCOM Comptroller’s office where a Military Interdepartmental Purchase Request (MIPR) is

generated. Attached to the MIPR is the same Form containing the Administrative, Quality Assurance Clauses and Shipping Instructions. The MIPR is sent to the Comptrollers Office at Crane where it is accepted. Once accepted and if there is already a contract in place, the Acquisition Support Group (ASG) will generate a stub, which will be entered into the Crane's financial system. The stub will contain the same Shipping Instructions contained within the MIPR. The order will be placed with the appropriate Vendor and they will receive the shipping instructions from the Primary Contracting Officer (PCO). Once produced, the Vendor is responsible to see that the ammunition is shipped to the appropriate location based on the shipping instructions directed by the PCO.

The APM may even opt to split ship the ammunition. For example, they may want it to be delivered to multiple locations. They simply have to indicate multiple Document Numbers, a Quantity Break-Down and multiple UIC's. The next time you are standing outside the office at the Ammunition Supply Point, and you see an eighteen-wheeler pull up with a load of bullets, now you will know how it got there, and no, it was not the Stork that delivered it.....

Time for a "Did Ya Know" Factoid...Did Ya Know that the War Memorial Foundation collected nearly \$200,000.00 through the end of 1951, but the prices for the Marine Corps Memorial continued to soar. The final cost of the project was \$850,000.00 – paid for entirely by donations, with 96% of the total coming from Marines. It took 3 years to create the 100-ton statue that is an engineering as well as an artistic triumph.

Mr. Payne is currently assigned as the Manager of the Acquisition Support Group, Code 4033, NSWC, Crane Division, Crane, Indiana and may be reached at DSN: 482-1804, e-mail: payne_r@crane.navy.mil

Ordnance Information System-Wholesale (OIS-W) Notice of Ammunition Reclassification Malfunction History Data Preview

Mr. Villa, MSGT, USMC (Ret)

Over the next couple of Quarters, we will be previewing the different area of the Navy's OIS-W. These articles will begin to familiarize all of us with the ammunition management system that PM-AMMO will be moving to for wholesale management of Class V (W) ammunition replacing MAARS II. Just for information Class V (A) uses the Navy CAIMS which is also moving to OIS-W. So the USMC Air Ground team will be using the same management system.

The NAR area was picked to start out with because we are all familiar with NAR's and know how important NAR information is to our mission.

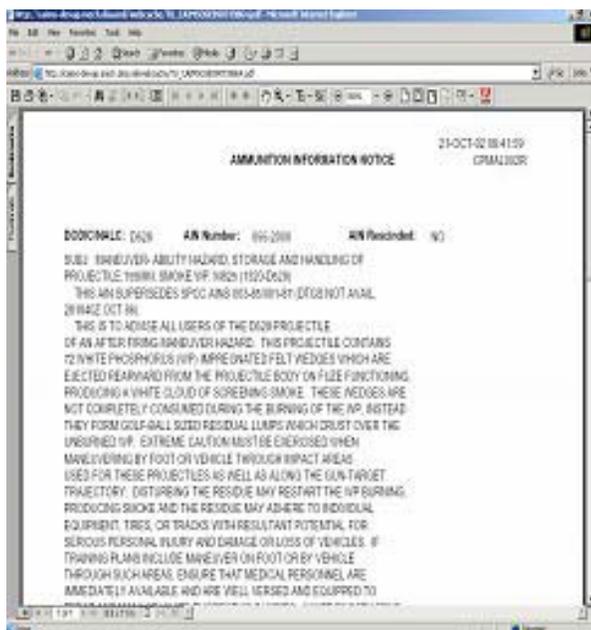
The NAR area involves Retrievals area, Maintenance Area and a Help Area. We will preview the areas as laid out by the NAR menu section. The first section is Retrievals. These areas consist of five main sections, Malfunction History Data Retrieval Options, NAR Data Retrieval Options, OHF Data Retrieval Options, Notice of Ammunition Reclassification (NAR) Report Selection Menu and Impact Assessment Interrogation.

We will begin with Retrievals and from retrievals we will look at Malfunction Data History. Let us begin the OIS-W journey.

When we enter the NAR retrieval area of OIS-W and select Malfunction History Data, we are presented with the option to retrieve data by NALC, Lot/Serial Number, NIIN, Nomenclature, NAR Number, SAMC Number, Malfunction/MIF Number or AIN Number. This menu is shown below:



If you had selected/Highlighted the AIN data on the NALC screen you would have been provided information as shown below.



NALC/DODIC AIN Report

As you can see by this preview, the OIS-W NAR retrieval area of Malfunction History Data is quite extensive and provides a significant amount of history data. As you will see over the next two quarters, when you combine the Malfunction data history, NAR data, OHF data, and the use of NAR Reports, you are able to access a substantial amount of NAR information designed to enhance your ability to provide the correct ammunition to the War Fighter. Next Quarter we will continue on in the NAR retrieval area with a preview of the NAR Data/OHF data areas and then finish up the NAR retrieval area with NAR reports the following Quarter.

Mr. Villa, MSGT, USMC (Ret)

EQual

Mr. Burrill, MCSC-PM Ammo-SYS Team

This Fall, Navy and Marine Corps activities will be able to quickly find qualified, certified ammunition and explosive safety personnel using a new online tool called *EQual*.

EQual uses a website, tied to a database, to streamline the existing Department of the Navy (DON) Explosive Ordnance Qualification and Certification (Qual/Cert) Program for personnel handling ammunition and explosive devices. Using the *EQual* website, activities can quickly find the same information currently stored in Qual/Cert, without having to search through endless paper files.

The Qual/Cert Program was created in 1972, in the aftermath of three aircraft carrier accidents attributed to errors in handling explosive ordnance. The Explosives Safety Program encompasses Navy and Marine Corps active duty, reserve, and civilian personnel.

The Marine Corps' Qual/Cert Program is a viable, effective, and necessary program; however, due to the significant documentation required and the manual processes to prepare and maintain records, it is extremely labor and management intensive. In 1997, the Assistant Secretary for Installations and Environment completed a review of the Department of the Navy's Explosives and Weapons Systems Safety Program and its documentation. The resounding complaint recorded about the Qual/Cert Program was that the documentation associated with the program was far too difficult. The review found that, except for some locally derived automated programs, the existing documentation methodology is a manual, paper-based system. Is the review also documented that during Explosive Safety Inspections (ESI), the most common discrepancies discovered were documentation related.

SAIC has developed a module called *EQual* for a Web-enabled Explosive Ordnance Qualification and Certification Related Database. The PM Ammo Systems Team will place *EQual* on the Marine Corps System Command's, Knowledge Management Portal. It uses existing security logins that prohibit access by unauthorized personnel, and provide access on a need-to-know basis. *EQual* will simplify Qual/Cert management. Currently the Marine Corps' audit, inspection, and review processes are totally centered on documentation, a paper-based system with the only automation being non-standard, activity-specific formats. *EQual* will simplify management by using standardization, which will reduce errors in the documentation. It also uses an automated database to validate the program data throughout the lifecycle, thus removing the requirement for manual checks and cross checks of the 180-Day Training Documentation Format for On-the-Job Training (OJT) and Formal training.

EQual's database schema is Open Database Connectivity compliant and interfaces with the Marine Corps Total Force System (MCTFS). This interface, combined with information collected and entered through the *EQual* website, continuously updates the *EQual* database. Eventually, all training documentation will be automatically entered into the E-Qual database.

EQual improves access to personnel records for authorized operators. *EQual* allows all Marines to review their personal records to ensure accuracy. Small Unit Leaders, Commanders, the Certification Board Chairman, and Board Members are able to view and update records of personnel under their cognizance. E-Qual issues alerts to notify management of records that are approaching de-certification dates and/or are not supported by proper documentation.

EQual also improves information storage. *EQual* contains ancillary information critical to managing Qual/Cert, such as driver licensing and medical screening. It is no longer necessary to hand-carry a Qual/Cert Program folder when changing commands. The information is stored in a repository and the entire history of a Marine's Qual/Cert is available through online services. By providing data integrity controls, all records will be instantly accessible online for Explosive Safety Inspections.

EQual ensures that when field activities need an instructor of a certain specialty, an online search will reveal the personnel with the desired competency.

Mr. Burrill is currently assigned to the MCSC-PM Ammo-SYS Team and may be reached at DSN: 378-3117 e-mail: BurrillSL@mcsc.usmc.mil

Ammunition Knowledge Management Portal News

Mr. Rodriguez MCPD/EDSI Corp and Ms. Mendoza MCPD/EDSI Corp, Fallbrook, CA

In the current FY the PM AMMO web development team rolled out an enhanced and updated version of the Knowledge Management Portal (KMP). The KMP continues to be the one stop shop for the

ammunition community as the Internet web site that provides access to a vast range of ammunition-related data.

This updated version of the KMP incorporates several new features as well as a new look and feel, which has changed ever so slightly to follow the color scheme of the USMC Class V (W) Ground Ammunition Seal.



USMC Class V (W) Ground Ammunition Seal

Look and Feel

Resource links are continually being added to the Alphabetical Directory on the KMP Home Page.



KMP Home Page

These resource links may be accessed by clicking on a letter in the Alphabetical Directory to display a drop down menu, shown below. Users needing access to information not appearing on the Drop Down Menu, may request a change in access level.

A second new addition is Muzzle Velocity Adjustments (Propellant Efficiencies) at the Lot Level, which are now published on the KMP on a regular basis. This information is provided at least once a year by the Marine Corps Program Department.

Two Future Additions

The KMP team is presently working to improve the Monthly Inventory Review Process. By web enabling this process, Ammunition Supply Points will be better able to collaborate with the Inventory Accuracy Branch at PM AMMO and MCPD over the web. The main goal of this effort is to make the process more convenient by automating e-mails, providing online metrics, and maintaining a history of past reviews.

Another project in the works is the Marine Corps Electronic Ammunitions and Explosive Qualification & Certification Program (*EQual*). By using this feature individual Marines will be able to lookup their Ammo Training Record on KMP. The Ammo Training Record contains information on training events, certification levels and operator permits. Additionally, *EQual* supports the administrative and management requirements as defined by MCO 8023.3A.



Ammo Training Record

With such useful information available at the click of a button, many people are interested in obtaining access to it. Fortunately, the approval process is simple, the approval request form can be found at the following URL:

<http://www.marcorsyscom.usmc.mil/ammoaccreq.nsf/Request+Form?OpenForm>



Drop Down Menu

New Sources of Information

Providing the most up-to-date information is a major endeavor of the KMP team. Currently many of the data sources arrive daily at the KMP from various Marine Corps organizations around the United States including PM AMMO, MCPD and MCD.

Other data sources are updated on a monthly, quarterly or annual basis. A list of most recent updates can be found on the KMP home page by viewing the Data Source section and referencing the "As Of" date.

One new addition to the monthly updates is the Prime Contractor information, which can be found in the reports section of the Alpha Menu.

DODIC	Name/Location	Prime Contractor 1	Address 1	Prime Contractor 2	Address 2
4023	Cartridge, 12 Gauge 1 Ounce Slug Commercial	Domington	Lenoir, WI		
4029	Cartridge, 5.56mm Ball M855 JOCIP	Alliant Tech LCAAP	Independence, MO		
4030	Cartridge, 5.56mm Dummy M200	Alliant Tech LCAAP	Independence, MO		
4032	Cartridge, 5.56mm Ball M855 Link	Alliant Tech LCAAP	Independence, MO		
4033	Cartridge, 5.56mm Tracer M855 Single Round	Alliant Tech LCAAP	Independence, MO		

Prime Contractor Information

Simply fill out the form and submit it, access is granted on a per user basis. Once access is granted, the user will receive e-mails that will provide logon and password instructions.

This updated version of the KMP will be easier to use, and will provide a much greater range of Ammunition-related data. Also, by centralizing this data into a single, worldwide point of access, the KMP will ensure that current, reliable information will be available to anyone in the ammunition community, anywhere in the world, at any time.

Mr. Rodriguez and Ms. Mendoza are currently assigned to MCPD/EDSI Corp of Fallbrook, CA in support of PM-Ammo IMSD.

Ammunition Budget Management System (ABMS)



Mr. Webster, IMSD Support

The Ammunition Programs and Budget Division (AP&BD) of PM-Ammo is responsible for planning, budgeting and executing the Marine Corps ammunition programs. There are three budgets in a budget cycle, Navy Comptroller (NAVCOMPT), Office of the Secretary of Defense (OSD), and the Presidential Budget (PRESBUD). The tool used to manage the \$100-\$200 million dollar procurement effort is the Ammunition Budget Management System (ABMS)

When it was developed in the early 1990s, the original ABMS represented a significant improvement over the pencil and paper method it replaced. For the first time, PM-Ammo could store all the information in an easily accessible electronic format. Data entry via keyboard was far easier than cutting and gluing paper printouts and filling out forms by hand.

However, in the transition to and from the Joint Ammunition Management Standard System (JAAMS), ABMS was delivered without having been completely tested. Several bugs remained in the program that

affected its credibility. Great strides had been made in easing the budget creation process but ABMS remained an imperfect tool leaving much still desired.

In April of 2002 PM-Ammo began work on a new version of ABMS that would take full advantage of modern technology and a key initiative then in development, the Knowledge Management Portal (KMP). ABMS would be available through an online interface, the KMP, and become a part of a greater Knowledge Management Enterprise (KME).

GySgt Powell spearheaded the effort on behalf of PM-Ammo by fully documenting and trapping the requirements of the new system and closely working with the development team. CACI provided the small but highly qualified development team led by Mr. Yeagy, who handled the overall project management as well as the interface programming, and Ms. Alexeev who developed the backend database.

ABMS Version 1.0 is a central information repository with a user-friendly interface that assists PM-Ammo staff with the budgeting process. Features include:

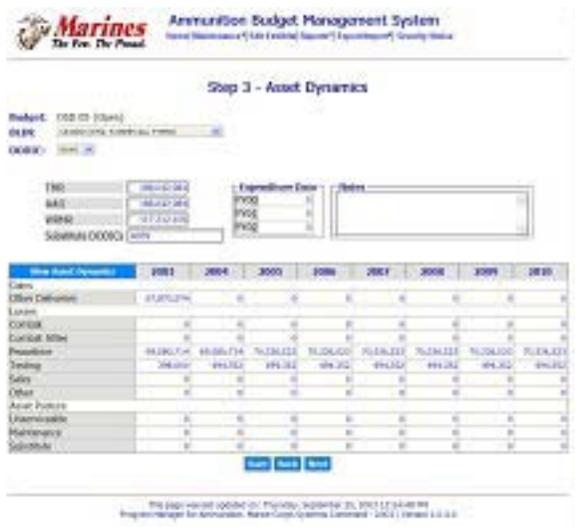
- Intuitive browser-based interface
- Online help specific to each screen
- Data entry and presentation in forms based on existing spreadsheets currently used by staff
- Data in tables can be sorted by clicking on column headers
- Data access simplified by key word and wild-card searches
- Budgeting calculations designed and tested in close cooperation with ABMS Administrators to ensure accuracy and relevance
- Web-based access makes ABMS available to all authorized ABMS customers from any computer in the .mil domain anywhere in the world
- Full permission-based security
- Simple system-management controls
- Centralized data in a secure database that is monitored and backed up daily

Information presented is limited to Sensitive But Unclassified (SBU) data used by PM-Ammo and its support elements



PP2 Data

Version 1.0 of the new web-enabled ABMS was delivered on April 8, 2003. A full year in development, thoroughly tested, the ABMS was received with excellent reviews. The process of budget creation had been streamlined into a series of steps that an Item Manager could follow for an associated budget line. These steps simplified the process of budget creation, saving time and money.



Asset Dynamics

One of the three yearly budgets in the cycle soon put the new ABMS through its paces. Feedback remained excellent on the ABMS though there were

items identified that will be included in future enhancements to the system. ABMS development continues as the system is fine tuned to suit the customer's needs.

Current features in the works include:

- Expanding the Step process of budget creation to include more customer options
- Expanding the import capability of the system over a wider range of data
- DODIC search capability to allow the member to navigate easily through the steps of the budget process
- Including other Services' data in the budget

The ABMS stands as a highly successful project and a clear winner for PM-Ammo. From requirements documentation, to development, test, and deployment on the KMP, close cooperation and an excellent teaming arrangement has led to the seamless incorporation of ABMS into the wider KME.

Mr. Webster is currently assigned with CACI in support of PM-Ammo-IMSD

“AmmoMail”

The Program Manager for Ammunition has re-established the “Ammo Mail” system, which is much like the existing “Marine Mail” system. The “Ammo Mail” system will serve as a medium for you to ask questions, send your thoughts, suggestions and recommendations on Ammunition related subjects to the staff at the Program Manager for Ammunition. This initiative is to focus attention to pertinent issues concerning the Ammunition Community. “AmmoMail” is a way to connect the “Ammunition Community” to improve the way we do business, to enhance communication among every member of the community, and to build a sense of connectivity that extends beyond geographic boundaries.

Send your questions, concerns and constructive criticism to AmmoMail@mcsc.usmc.mil we will provide an answer with-in 30 days of receipt. Additionally we will post a limited amount of questions received in the upcoming Ammunition Quarterly with answers provided. Through your questions, your thoughts, and suggestions we receive, we will open another avenue to garner fresh ideas for continued improvements with-in the “Ammo Community” and enhance the way we do business.

TAMIS-R Update

Several updates to TAMIS-R are on the horizon, as a direct result of request by users of TAMIS-R. The contractor providing support for TAMIS-R, Automated Information Management, Inc (AIM) plans to bring the changes on line by January 2004.

The most significant change will be with the requisition module, currently known as a "TR" or Transportation Request. The new module is called a "TAR" or Training Ammunition Request".

In its current state, the TR does not allow units to cancel a portion of a pending request; rather the entire transaction must be cancelled. Additionally, in order to change the pick-up date or cancel a request, users must run a report to find the TR in the system, and then initiate the date change or cancellation.

The revised module, the TAR, will allow units to cancel a portion, by DODIC, of a pending requisition. Furthermore, users do not have to run a report to access pending transactions for cancellations or date changes. The new TAR continues to prevent users from requisitioning DODICS or quantities above what was allocated by senior commands for the FY.

Other changes to TAMIS-R include associating access (user ID/Password) with the Common Access Card (CAC) system coming online DOD wide. AIM realizes that not all users have CAC access, therefore they have incorporated software that will allow users logging into the system from non-DOD platforms to obtain a digital signature.

Finally, AIM has undertaken the challenge of enabling a data transfer from ROLMS to TAMIS-R. After a demonstration of the manual turn-in/expenditure process, AIM representatives realized how cumbersome the manual process is for Marine units to have accounts debited/credited for transactions. While a full interface between TAMIS-R and ROLMS, similar to the interface between TAMIS-R and the Army's Standard Army Ammunition System (SAAS) system may be some time in the making, this interim step is viewed as a great enhancement.

"Ammunition Quarterly"

The Ammunition Quarterly (AQ) provides a network and communications medium for the Marine Corps Ammunition Community to share information. It is your newsletter and your comments, suggestions or questions are welcome. As always this is the Ammunition Communities Newsletter and is intended to provide new and experienced Ammunition personnel with pertinent information. Produced quarterly the AQ is posted to the Program Manager for Ammunition Web Page, The Knowledge Management Portal and distributed by hard copy to select organizations lacking full IT capability. As well, our AQ is distributed widely throughout the USMC to include most General Officers.

The editorial staff invites authors to submit articles dealing with topics drawn from several areas' pertaining to Ammunition. Articles may be on a wide array of issues and topics, including processes, analysis, evaluation, activity, success stories, research and ammunition safety. Have you found a way to do something smarter, faster or improve your activity? If so, the AQ is a forum in which you can share your successes with your counterparts throughout the Marine Corps. Ultimately, these shared ideas will improve our ability to rapidly get the steel on the target!

Make a commitment today and write an article to enhance the knowledge of the "Ammunition Community". Challenge your Marines and Civilian counterparts to put pen to paper and be proactive with-in their community. Provided below are issues and deadlines for publication of your Ammunition Quarterly:

Publication Schedule and Deadlines

Issue	Deadline
January 1	November 20
April 1	Feb 20
July 1	May 20
October 1	August 20

Ammunition Quarterly 2003 Authors

As editor of the Ammunition Quarterly (AQ), I have the distinct privilege of assembling the AQ and would like to thank all the dedicated professionals who sacrificed their spare time to contribute articles this year.

As the newsletter of the ammunition community, the AQ relies on the real "Subject Matter Experts" who have done their time in the ASP's, the FASP's, on the ships and on the ground in Iraq. This year, more than 40 ammunition professionals shared their experience and expertise in the pages of this newsletter.

We received contributions that wrapped around the world and all points in between. The contributors receive no pay or perks for their efforts. They each spent hours on their articles because they saw an opportunity to share their knowledge of important issues.

Thanks to our contributors, the ammunition community found new insights into everything from fuzes, cartridges, computer systems, safety and our road ahead. We are especially grateful to the Marines in Kuwait who blew the sand out of their keyboards and reminded us of what life is like at the pointy end of the spear.

In the coming year, we will continue to recruit new contributors to submit articles that are relevant to you, the ammunition community. Challenge your Marines and civilians to make a contribution to your "Ammunition Quarterly".

The following is a list of authors by AQ editions of those who have made a difference:

January 2003

PM AMMO Releases KMP Phase II
Mr. Franks MCP, MOUS

USMC Explosives Safety Officer (ESO)
Training/Certification
Mr. Morrison, PM-Ammo-EES

The Winds of Change... Ammunition Logistics Focus
Team (ALFT)
Ms. Ross and Mr. Banks, PM-Ammo-IM, and CACI
Federal Systems

THE M1134A4 LINE CHARGE FUZE
Mr. Payne, ASG Manager, Code 4033, Crane IN.

Linear Demolition Charges; Why CC: N?
Captain Liller, APM Demolitions and Linear
Demolition Charges, PM-Ammo

April 2003

2003 NDIA Munitions Executive Summit "Life Cycle
Management Multiplier Effects"
Program Manager for Ammunition

ROLMS "Outside the Box"
GySgt Cleveland PM-Ammo-SYS

DON Explosives Safety Conference
Mr. Morrison, PM-Ammo-EES

Stratification/Cross-leveling Saving The Marine Corps
Money; What A Concept
WO Inns, PM-Ammo-IM

Monthly Inventory Review Report
MSgt King PM-Ammo-IA

NALMEB Support of Operation Enduring Freedom -
Winter 2003
CWO2 Battistoni, MARFOREUR, G-4 Logistics

The End of an Era
Mr. Payne, Manager, Acquisition Support Group,
NSWC Crane, IN.

Defect Codes, what are they? And why do we need
them?
CWO2 Walker, PM-Ammo-IA

Enhanced ROLMS functionality for MPF
Mr. Black, PM-Ammo-IA

July 2003

From Kuwait
MGySgt Chavez, Operations Chief, Camp Fox

Redstone... Delivers Weapons of Mass
INSTRUCTION... Everyday!!!
MGySgt Shustack and MSgt Taylor MCD, Redstone
Arsenal, AL

Ammunition Programs and Budget Division
APB&D Management Team, PM-Ammo

The Acquisition Support Group (ASG) Marine Corps
Ammunition Branch Code 4033
Mr. Payne, Manager, ASG, NSWC, Crane, IN

The New "Silver Bullet"
Captain, PM-Ammo

Instructor-Inspector Staff, Topeka
CWO3 Garrett, I-I, Topeka, Kansas

"It is not a question of if; it is the question of when"
CWO2 Linn, Las Pulgas ASP

Ecuador, Mission Complete
GySgt Singleton, MCD, Redstone Arsenal, AL

I-I, Greenville, SC supports Camp Lejeune ASP
CWO2 Harman, Camp Lejeune, ASP

3D Marine Division's Ammunition Office
Captain Oliver, 3D Marine Division Ammunition
Officer

Marine Day
Mr. Lettinhand, PM-Ammo-OPS

Supported Unit Iterative Transformation-Ammunition
(SUIT-A)
Ammunition Logistics Focus Team (ALFT)

October 2003

Weapons/Ordnance Safety Qualification Process "It's
Just Not That Simple"
Mr. Allred, PM-Ammo-IWA Team

Generation Z
GySgt Cleveland, PM-Ammo-SYS

Life at Camp Fox
LCpl Smalls and LCpl Sarfati, Camp Fox

Logistics Division
Mr. Chiapello, MCSC, PM-Ammo, Head Logistics
Division

Environmental and Explosives (EES) Safety Team
Mr. Morrison, PM-Ammo-EES

Plans Team
LtCol Dachman and CWO3 Emminger, MCSC-PM-
Ammo-Plans

Operations Team; Single Point of Entry for
Coordination
Mr. Lettinhand, PM-Ammo-OPS

Marine Corps Liaison Officer, Naval Weapons Station,
Seal Beach and Detachment Fallbrook, CA
CWO3 Sanders, MCLNO NWS Seal Beach and
Fallbrook

40mm Mk 281, Mod 0 Target Practice Cartridge
(DODIC BA12)
Mr. Miller, PM-Ammo-IWA

Camp Schwab Container Operations
CWO2 Donnell, OIC, ASP, Camp Schwab

MCB Quantico, Supporting the National Capitol Region
CWO3 Frappier, OIC, Ammunition Supply Point MCB
Quantico

ASP, Camp Lejeune Marines are coming home to
numerous changes, All good
Manager Course 002-03

Goodbye MAARS, Hello OIS...
Mr. Banks, CWO4, USMC (Ret.)

A Brief Discussion on DoDAAC, UIC, RIC, and RUC
Mr. Villa, MSgt, USMC (Ret.)

Ammunition Knowledge Management Portal
Mr. Burrill, PM-Ammo-SYS

Reserves Conquer Norway
CWO3 Fulton, Inspector Instructor, Rome, GA

Greetings, Salutations and where do DoDIC's and
NSN's come from?
Mr. Payne, Manager, ASG, Code 4033, NSWC, Crane
Indiana

Ammunition Logistics Focus Team-Update
CWO5 Patterson, Redstone Arsenal

Marine Corps Ground Ammunition School

FY 2004 MANAGERS COURSE DATES

Class 001-04 @ Redstone Report Date 23 Feb 04, Grad Date 25 Mar 04. The Ammunition Managers course includes the Explosive Safety for Navy Facility Planning Course (Ammo 36).

Class 002-04 @ Redstone Report Date 24 May 04, Grad Date 28 Jun 04. The Ammunition Managers course includes the Explosive Safety for Navy Facility Planning Course (Ammo 36).

Class 003-04 @ Redstone Report Date 23 Aug 04, Grad Date 27 Sep 04. The Ammunition Managers course includes the Explosive Safety for Navy Facility Planning Course (Ammo 36).



FY 2004 NCO MTT DATES

Class 002-04 @ CPCA Report Date 12 Jan 04, Grad Date 11 Feb 04. 25 school seats available for this class. The NCO MTT course includes the Naval Motor Vehicle and Railcar Inspection Course (Ammo 51).

Class 003-04 @ CLNC Report Date 21 Apr 04, Grad Date 19 May 04. 25 school seats available for this class. The NCO MTT course includes the Naval Motor Vehicle and Railcar Inspection Course (Ammo 51).

Marine Corps Ground Ammunition School

FY 2004 NCO MTT DATES (Continued)

Class 004-04 @ CPCA Report Date 12 Jul 04, Grad Date 9 Aug 04. 25 school seats available for this class. The NCO MTT course includes the Naval Motor Vehicle and Railcar Inspection Course (Ammo 51).



Marine Element Points Of Contact

OIC - (256) 876-8441 DSN 746

SNCOIC - (256) 876-8441 DSN 746

Senior Instructor (256) 842-2604 DSN 788

Instructors:

(256) 876-1749 DSN 746

(256) 842-2535 DSN 788

(256) 842-2540 DSN 788

(256) 876-4400 DSN 746

(256) 876-1691 DSN 746

Training Ammunition Management Information System - Redesigned (TAMIS-R)
- TAMIS-R will serve as the Marine Corps standard for forecasting training ammunition at Marine Corps and Army facilities.
- TAMIS-R will fulfill the Statement of Annual Requirements (SOAR) requirement of the P4400.150 series.