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Ammunition Quarterly

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From the Program Manager



Mr. Jerry Mazza
Program Manager for Ammunition

I am genuinely enthused at the level of interest and contribution to this publication from our junior Marines, NCO's, SNCO's, Officers, and civilians within the Marine Corps ammunition family. It seems as though we all have a story to tell. I wanted to continue the theme of educating you on my office, the Program Manager for Ammunition. Mr. Chiapello continues where we left off at the last edition, and provides a very good overview of the roles and responsibilities of my Logistics Division. You will also note several contributions from the operational side, "Life at Camp Fox" and "Generation Z". Our Ammunition Supply Points Quantico, Okinawa, and Camp Lejeune each add a unique retail perspective to our mission. If you ever wondered how we ensure safety in fielding of new weapons and/or ammunition, Mr. Allred, one of my staff engineers has taken the lengthy, challenging process and reduced it to a short, detailed overview. That article is representative of the many actions required to field the new 40mm Target Practice cartridge (page 21) and every new weapon or munitions in our inventory. Rounding out this edition is CWO3 Sanders and the Fallbrook Liaison mission.

As you all know, we are very "systems" dependent and you will see several related articles and updates.

Welcome readers, to the Fall edition of our community information newsletter. It is hard to believe we are approaching our ninth year in distribution of this publication. As I read through the draft, it was evident that the Ammunition Quarterly has grown over the years to what it was originally intended...a forum for the Occupational Field to sound off, advise, educate, and inform. I have often said that the collective management of Class V (W) is challenging and complex. With each publication, this becomes an increasingly valid statement as the articles continue to address the entire life cycle spectrum of our commodity. It would be very difficult to call out each of the well-written articles in this edition.

Our pending migration to the Naval "Ordnance Information System" is truly significant as we will enter into a Naval solution as well as position the supply Class V information system for inclusion into the family of systems that will comprise the Global Combat Support System - Marine Corps (GCSS-MC). As part of our migration we are addressing the below retail/support unit functionality with the Ammunition Logistics Focus Team (ALFT) spearheading this effort. A "must read" is CWO5 Patterson's ALFT update article as it talks to the first Iterative Transformation Initiative (ITI) in support of the "Supported Unit Iterative Transformation-Ammunition (SUIT-A)" which is forecasting. ITI forecasting will capitalize on existing Army functionality that will become part of the Support Unit Ammunition Module (SUAM) in support of OIS and GCSS-MC. I am sure you will enjoy and find value in this edition. Most importantly, thanks for all of your assistance and be safe! Semper Fi

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.
More info on page 36

Weapons/Ordnance Safety Qualification Process “It’s Just Not That Simple”

Mr. Allred, MCSC-PM AMMO-IWA Team

Do you ever remember observing a new weapon system or ordnance item being issued to your unit? Was the first thought through your mind, “Cool, I’ve got to try this thing out!” or was it, “I hope this thing is safe to use!” Most likely it wasn’t the latter. This article is an attempt to give some peace of mind that if you do receive some of these items, you can be assured that they have gone through some very intensive testing and analysis efforts to verify that the USMC is delivering the safest product possible to the Fleet.

To keep this article to a manageable length, focus will be very top level and center around the safety qualification process, in general, of any given weapon or energetic item and will not discuss any performance testing or requirements. In addition, I will not rattle off each NAVSEAINST, MIL-STD, MCO that govern or provide guidance to the overall process. The intent of this article is to give the layman a better understanding of how and what weapons and ordnance items must go through prior to being issued to Marines.

The first step in the safety process starts with the program office responsible for the item. It begins with the establishment of a System Safety Program to oversee the safety aspects of the program. It of course initiates with the development of the System Safety Program Plan (SSPP) that basically describes the overall generic structure of how the safety effort will be accomplished. From this document, a multitude of documents, plans and reports, to support the system safety effort, are developed.

Probably the most important document generated in the initial phases of the program is the Threat Hazard Analysis (THA). In more general terms, a THA lays out all possible threat environments that the item could possibly be exposed to during its lifecycle and is the baseline for establishing the parameters for the safety and environmental test program.

Environments include attention to climatic elements such as temperature extremes, temperature shock, humidity, dust, salt spray, electrostatic discharge (ESD), hazards of electromagnetic radiation to ordnance (HERO) etc., but also include transportation vibration environments such as experienced with tracked vehicles and helicopters. These tests and analyses are performed to verify the ruggedness and soundness of the design to withstand or protect the item against these environments.



120MM Gun Barrel Rupture

Additionally, the THA identifies the possibility of exposure to the more hazardous environments of fast cook-off (FCO), slow cook-off (SCO), sympathetic detonation (SD), bullet impact (BI) and fragment impact (FI). These are naturally unplanned but increase in probability of occurring when a conflict or combat conditions commence. These tests are more commonly known as the insensitive munitions (IM) tests. The IM tests simulate possible scenarios that could occur once the item has been fielded. For example; the BI test assesses the reaction of an item that could be stored at an Ammunition Supply Point or being transported on a 5-ton truck that is engaged with a .50 Caliber machine gun. The reaction could be as mild as no event or burning to a devastating reaction such as a detonation.

Once a good THA has been developed, the program, test and safety team lays out a test and/or analysis program to prove out the item and qualify the item/system. This test program could be extremely extensive or could be very simple depending on the environments noted in the THA. For example; if an item cannot be transported by air, no air transportation testing is required. If it is a specialty item that will only be utilized at the North Pole, the extreme high temperature tests should fall out. However, the

converse is true as well. If your item is specialized and will be exposed to additional hazards outside the norm, e.g. radiation, extremely high G-forces, etc... the program needs to add additional testing to cover those environments.

Everyone still with me? Good, because now I'm going to loose you. Now, about the same time as the THA is being put together, the program safety people should be developing a Preliminary Hazards List or a Preliminary Hazard Assessment (PHL and PHA respectively). The PHL is just a list of identified hazards in the lifecycle use of the item, which will eventually turn into the PHA. The PHA, in turn assessed each of these hazards and identifies the causal factors, establishes a preliminary hazard risk and probability of occurrence, and finally provides proposed mitigating steps that would reduce or eliminate the hazard or probability of the event. For each hazard assessed, you open a Hazard Action Report (HAR), which tracks the efforts to mitigate or eliminate the hazard. If you have subsystems to your system you repeat the process in a Sub System Hazard Analysis... AAARRGG! Stop the madness! Let's cut to the chase. The safety folks look at the overall system as well as its' components to identify any and all hazards at all phases of the lifecycle of the item. They determine if the hazard occurs, will the event merely pinch your finger or will it eliminate you, the building your in and several metric tons of earth that the building was sitting on. They also determine the probability of the event. One in ten, one in a hundred or over one in a million. If you are pinching your finger once every hundred times or so, it may be irritating but might be the cost of doing business. However, if the latter scenario has the probability of occurring one out of ten times, some serious thought needs to go into the design or there are going to be a lot of openings in that MOS.

Everything discussed in the previous paragraphs is very time consuming and normally takes several months if not close to a year to complete for complicated systems. And remember, in some cases you haven't even finalized the design or performed any substantial testing. The documents are living and grow throughout the program even after the item has been fielded. The ultimate goal of the system safety process is to interject safety philosophy early so that design changes can be made to eliminate or drastically mitigate all hazards to an acceptable level in the final design. The overall initial process is a little different for an item that is being evaluated for use that has been qualified by another Service, Foreign Country or is a Commercial

Off The Shelf (COTS) item. Although the safety philosophy and requirements are the same, you may not be able to change the existing design and most likely will have a large amount of data that can be assessed reducing the test and analysis program.

Well, enough said, you are now ready to test. Using the safety and environmental test plan you prepared based on the THA you begin testing. While your test program progresses which normally takes approximately 1.5 to 2 years for a medium sized program, there are things that need to happen concurrently.

If your item utilizes energetics, they need to be "Type" Qualified for Navy use. So if you have a new explosive, booster, detonator, primer and propellant, each energetic component needs to be "Type" qualified as a single item. The tests aren't cheap and they take several months to complete. So, a good program tip is to use already "Type" qualified Naval energetics, which have already gone though the process and have known and accepted safety and sensitivity characteristics.



Damaged Shotgun Barrels

Hazard Classification tests need to be performed to get a hazard and compatibility rating from not only the Navy but from the Department of Transportation. For most energetic items, this consists of an additional 4-5 tests, some of which can be harmonized with the IM tests. For example, if properly coordinated and performed correctly, the FCO test can be substituted for the external fire test required for hazard classification or vice versa. However, I take the upfront coordination with the appropriate office of authority. Once your hazard classification tests have been performed, you still

require the completion of ESD and HERO testing as well as several other ancillary tests before you can be assigned a final hazard classification.

Does your item have a fuze? If so, you must validate the safe design of the fuze. Again, this is a long process that starts with the review of the basic design and observing how the fuze reacts during your test programs. In some cases, specific fuze tests may need to be performed; e.g. safe separation before arming, impact sensitivity, etc . . . All safety compliance data needs to be compiled to present to the Fuze and Initiation Systems Technical Review Panel (FISTRP). This panel assesses the safety of your fuze and presents the Panels findings to the Weapons Systems Explosives Safety Review Board (WSESRB), which we will talk about later in this article.

Does your system/item utilize software to operate your fire control, control your safe & arm device, etc? Then you need to make sure that your software algorithms/code is reviewed by the System Safety Software Technical Review Panel (SSSTRP). Same as for the FISTRP, the SSSTRP assesses the system safety of your software and presents its' findings to the WSESRB.

Do you utilize a lithium battery? Yep, need to get it certified. Laser? Yep, certified.

You need to demonstrate that your system will not have any adverse effects on the operator. For example, overpressure, noise, toxic fumes etc... Your data will be verified by Naval Medical Personnel who sit on the WSESRB.

You need to develop a demilitarization and disposal plan?

You need to coordinate with the Explosive Ordnance Disposal Detachment and provide them the required information to develop disposal procedures for your item.

Your environmental and hazardous material compliance documentation needs to be developed and reviewed/approved by the appropriate authority.

...and the list goes on and on and on. Bottom line; an enormous amount of effort is expended in the planning, assessing, testing, documenting, validating, certifying, complying etc... with literally thousands of requirements levied on every program regardless of

program size or complexity. All of the programs' efforts with respect to safety certification boil down to two basic final processes. The IM Waiver Process and the WSESRB Process.



Close-up damaged Shotgun Barrel

First the IM Waiver Process; By edict from the Office of Secretary of Defense, ALL ordnance items are required to be completely IM compliant (With the exception of small arms, 50 Caliber and below which are exempt). If the item being develop fails ANY of the IM tests, it requires a waiver. The data obtained from the IM tests needs to be assessed and presented to no less than four boards and panels before it reaches the Joint Requirements Oversight Committee (JROC), which issues the waiver. In order to receive the waiver, a funded plan must be provided indicating how the program intends to become IM compliant either by modifying the design of the item itself or by modifying the packaging. This routinely runs several hundreds of thousands of dollars and takes several years to complete. The waiver is purposely limited to one or two years to assure that the program will return and present their IM compliancy plan before they receive an additional waiver. This process continues until the item becomes and is certified as IM compliant. Of the nearly 350 ordnance items handled by the ground Marines, I only know of one that is fully IM compliant. Due to the limited panel/board meetings, the process of gaining an IM waiver from the first board through the JROC is 12 to 18 months. This 12 to 18 month period is almost always at the end of the acquisition process, just prior to full rate production. This is due for the need to have all supporting tests and data available for the IM briefings and literally delays the fielding of most items for that period of extra time.



MK 19 damaged Machine Gun barrel

However, I've saved the best for last... The WSESRB... the Queen Mother of the Naval safety process. The WSESRB is the final focal point where all of the efforts described within this article are analyzed, assessed and verified prior to the authorization to begin full rate production. There is often some confusion that the WSESRB is a single and or final board. This is for the most part incorrect. Although, a program may only brief the WSESRB once, there are many additional exchanges of correspondence between the program safety office and the WSESRB to resolve outstanding safety issues pursuant to the WSESRBs' final recommendation to proceed into full production and fielding of the item or weapons system. More often, a program has come before the WSESRB several times in the programs' development, testing and pre-production phases. Initially, a brief is provided as an introduction and to gain concurrence with the programs' system safety approach. This usually yields some additional guidance and insight from the WSESRB on the overall program safety effort. It is not uncommon for a program to give a well-prepared and supported brief, only to leave with a laundry list of action items to complete; some simple some very difficult. Regardless, all action items need to be resolved. Some through additional testing and data some by the Program Office rejecting the action item and assumes the risk/hazard.

As a more general summary, through continuing interaction between the WSESRB and the program safety office, the WSESRB verifies that the program has adequately addressed all safety aspects with respect to transportation, handling, storage and use of each item. Additionally, they validate that environmental, IM, human effects, energetic "Type" qualification and hazard classification requirements have been adequately

addressed. In general, they are the final sanity check for Naval systems safety.

Simplistically, once you have received a favorable final recommendation from the WSESRB concurring with the production/fielding of a weapon or ordnance item, one can be certain that an extensive safety effort has been performed and has been checked and validated by several responsible factions. Each entity fixated on not allowing an unreasonably unsafe item to get into the inventory either from the perspective of transportation and storage, but in use.

In closing, at least conceptually, I hope I have given a reasonable 10,000ft perspective of the general Navy safety qualification process of weapons and ordnance items. It's not comprehensive in detail but gives you a good idea of the scope of the safety effort. If you gain anything, know that it is a long, expensive and painful process for the program office. It is not uncommon for a program to be in the qualification process for 4 to 5 years and cost several hundreds of thousands if not several millions of dollars. But all efforts are undertaken with the knowledge that young Marines, their sons/daughters as well as our sons and daughters may someday utilize the weapons in the future that we put in the inventory today. None of us are willing to put any of those people in jeopardy even if it means taking a lot of extra time and spending a lot of extra money. So, if you see that new weapon or ordnance item being issued to your unit... my advice is, get trained, follow the appropriate procedures and Rock & Roll!

If anyone would like a little more technical discussion or ask specific questions about the safety/IM qualification process, please feel free to contact me from the information provided below.

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Generation Z

GySgt Cleveland, MCSC-PM AMMO-SYS Team

Generally the readership of the Ammunition Quarterly is by Senior and Middle management within our ammunition field. Lately PM-AMMO has personally made attempts to reach a wider breadth. My supervisor gave me the marching orders – while you are

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in Kuwait get the word out to those in the trenches! While in Kuwait, I saw just what our new corps is going to be, in the trenches. I witnessed, what I myself experienced just a couple decades before, and was overwhelmed to know we have some great Marines coming up to carry on the Corps. Let me take a moment of your time to share my first hand account – Lets Call it the Life in Kuwait for Generation Z...

During my short visit with the FASP in Kuwait I had encountered numerous Marines whom I have come to know and enjoy. I know that all over the Marine Corps there were countless sacrifices and young Marines. I was fortunate, to have met two such Marines who attack their job with a youthful vigor, LCpl Smalls and LCpl Sarfati.



Ammunition Convoy

These Marines while not in the trenches of the war shooting bullets; were in the trenches insuring that bullets were being fired. These two young men are our future; they are forever in-bedded in a country that they never knew existed. Young minds seeing what many older Americans have seen from decade to decade, but at a young electronic age of video games and eBooks.

What makes these Marines different? Both of these men, as do all Marines, come from different backgrounds; yet the Corps and a War brought them together as brothers.

LCpl Lamar Smalls hails from Manhattan, New York and LCpl Jason Sarfati is from the Long Horn state of Texas. They both come courtesy of the United States Marine Corps. Their jobs, Record Clerks with the Field Ammunition Supply Point, 2nd FSSG, Camp Lejeune N.C. It can be a thankless job, but their experience as Generation Z and the MOS training

prepared them well for this assignment. Combined, they have a total of only 2 ½ years of experience, but their efforts suggested more. I chuckled at this as I reflected back to my duty station (my section has over four Warrant Officers with a combined total of over 80 years experience!)

LCpl Sarfati has only been working the records section for about six (6) months now. His personal hobby and interest in computer technology helped him grasp his duties as a Record clerk without fear. He is very meticulous insuring that no corners are cut and no stone is left unturned when it comes to proper paper work being turned in for processing in the Retail Ordnance Logistics Management System (ROLMS). His partner carries the same work ethic - LCpl Smalls has issues a proclamation “He was made for this job.”

This was relevant the very first day I met these two Leathernecks! There were many of nights that I would leave and then return to see LCpl Smalls still knee deep in the thick of things, helping out the second and third shifts (the work load had been so tremendous that extra shifts were created to tackle the workload.) The evening crew often made fun of LCpl Smalls by saying “He would sleep here if he could”.

I asked both LCpl Smalls and LCpl Sarfati about ROLMS and what it meant to their jobs. LCpl Smalls replied, “Not many Marines in the ammunition field get a chance to use a program database such as ROLMS to do their job.” They both say that ROLMS has been a great benefit to them during the fight for Iraqi Freedom. I explained that many a war was fought with the handwritten 1348's and 10774 cards, it made them realize how far tracking ammunition has come.

Many Marines in our career field experience a lot of different sections in the ammunition field, such as the Issues section, which deals with all issues and receipts when our deployed units come in. There is also the Storage section, which maintains physical accountability and maintenance of the ammunition. Few, very few get to see the Records side. Being a Records clerk myself, I realized that everything starts with Records, and ROLMS is their power tool. These proud Marines agree that their knowledge of ROLMS has grown quite a bit, and the real test was being at war.

In preparation for going to Camp Fox, LCpl Smalls and LCpl Sarfati along with three other marines loaded ROLMS onto two brand new Dell servers and prepared them for shipping. During Preparation they

constantly conducted testing to make sure that they had everything on the servers that we needed, such as pubs, cross references, NARS, etc.

“Of course everything wasn’t perfect when we arrived in Kuwait”, LCpl Sarfati said, “but we researched and learned to fix those situations. One of the problems that occurred while at war were programming errors in which we had to expand our database because of the massive amount of data we were processing. In addition, to getting ammunition to the front line our goal was to maintain as close to one-hundred percent accountability of the ammunition that was stored at our FASP, and that’s what we did.” With this came many sacrifices such as sleep time, time to just relax. “We as ammunition technicians came out here with the mind to work and get the mission accomplished at almost *any cost*,” said LCpl Smalls.

The transportation of data proved the hardest task to troubleshoot, the two agreed. The Tape Drive kept failing and the Floppy disks simply did not work in this hot, gritty, sand-blowing environment. No matter how clean the shelter or the drives were kept, they simply would not work or hold data. The records section relied heavily on one CD burner for the majority of the war. As time progressed and Camp Fox grew bigger the FASP came into possession of several USB flash drives that saved much time and many headaches (a simple toy for Generation Z!)

The reliance upon this technology grew, soon all FASP personnel began doing the little things such as covering and cleaning their computers daily. Conducting computer maintenance on all computer assets daily. This proved to be vital as the war progressed. Failures became less frequent and the productivity increased. Since my arrival in June I can say that the records section has really ‘morphed’ and they have adapted well to their environment and its hardships. The technology provided was put to use in a second natured that I could never grasp.

As I start to pack and look forward to my journey on the ‘Freedom Bird’, I truly believe we are in real great shape for the future.

What makes these Marines different? I believe in my hearts of hearts that there is nothing different. These Marines were at war and found a way to deal with the environmental challenges; it was their statement that ‘We are in this fight too!’ A Marine given a chance to shine will seize the opportunity. Marine at war will

always shine during the opportunity. This Generation Z has some brilliance all of its own!

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Life at Camp Fox

LCpl Smalls and LCpl Sarfati, Camp Fox

Like all of the Marine camps, Kuwaiti Contractors and the U.S. Marines stationed here built Camp Fox from the sand up. At first, living was a little rough, even prehistoric sometimes, but with time, a tremendous amount of effort and with lots of work Camp Fox has become a civilized place to live and work.



Ammunition Operations

Five months after inception, Camp Fox was transformed from a barren sandy piece of the desert into an inhabitable community. Boasting many of the familiar comforts known to the Marines, such as the Marine Corps Exchange an affordable and accessible place to shop for incidentals, the all-important Food Court built to satisfy the hunger pains felt by many Marines after dining on a bag of “bag nasty” and to offer an alternative to the prepared meals, the stress relieving, energy boosting Recreation Center and the ever so important Exchange Telephone Center bridging the gap between Marines and their families. Camp Fox also has the unique distinction of having a shuttle bus service that transports Marines from their living quarters to work, recreation, the telephone or wherever they need to go within Camp Fox.

Marines live in contracted tents that have two air condition units in each tent to help squelch the stifling heat customary to the desert. The oppressive temperatures are a huge factor in the safety and welfare of the Marines stationed here, with temperatures often in the three digit range each work station is also equipped with two air condition units and each command is provided a huge ration of bottled water to aid in the prevention of dehydration and heat exhaustion.

“U-Rah” the e-tool is not needed at Camp Fox! Camp Fox has another glorious distinction, countless “Don Johns”, port-a-potty, portable toilet facilities, whatever you decide to call them; Camp Fox has a hundred of them. Unlike other field experiences, the portable toilet is a favorite luxury item among the Marines making their sitting or standing pleasure more bearable. By 0800 every morning the portable toilets are emptied and cleaned by contractors. Camp Fox is even equipped with showers and bathing facilities. Showers are staged in each battalion area, and bathing areas are in trailers that house approximately 14 shower stalls and eight sinks. Each battalion has several of these trailers to accommodate their personnel.



Camp Fox Accommodations

Now that you are all fresh and clean and your stomach is full of “Taco’s” it is time to clean those cammies! A free laundry service is available aboard Camp Fox. Marines’ can turn-in and pick-up their laundry daily between 1000 and 1400, this service normally takes 3 to 4 days, and for some this is a minor inconvenience. Therefore, a paid service is available for those who prefer to have their items back immediately.

If you want to get Camp Fox Marines excited, tell them that it’s “TACO Night”! “TACO Night” is every Wednesday night when Marines feast on Mexican fare. On this night the dark wooden floor of the Kuwait

double large tents, set up as chow halls, are full. Most nights both Marines and Navy personnel settle for the American fare of Burger King, Subway, pizza or even an MRE will suffice until Wednesday. This is also the night that Marines use to mark time, an indicator of their remaining time at Camp Fox, it is not uncommon to hear, “just one more “TACO Night”. You might be asking yourself, “How many more TACO Night’s for me?”



Camp Fox Food Court

It is important to note that Camp Fox Marines recognize that many luxury items not found in a traditional field environment surround them and they appreciate it all. They are also faced with the distinctive mission, unfamiliar to many Marines, of inventorying, cleaning, packing and shipping everything remaining from the war back to the States. As a result of the increased demand on Camp Fox Marines, battalions are conducting operations 24 hours a day with, Marines working 12 to 15-hour days, 7 days a week, with little or no liberty. So, while Camp Fox is certainly not the perfect place to be, it certainly is one of the most civilized, luxurious field assignments.

LCpl Smalls and LCpl Sarfati, are currently assigned to Camp Fox



Logistics Division

Mr. Chiapello, MCSC, PM AMMO, Head Logistics Division

This issue of the Ammunition Quarterly focuses on the Program Manager for Ammunition, Logistics Division. In addition to this article, each of the three teams that comprise the Logistics Division has written articles to broaden or enhance your understanding of the Logistics Division mission. My intention is to illustrate our organization, describe the impacts of recent significant events - how they are being incorporated, and articulate initiatives underway designed to shape our future.

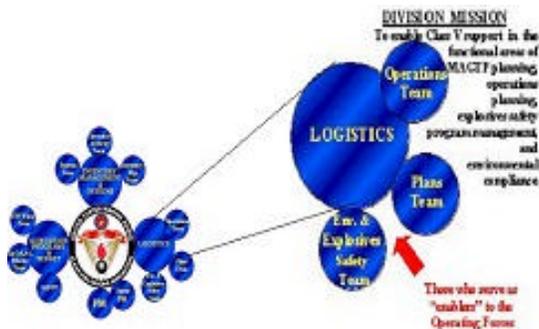


Figure 1. Log Div Call out in PM AMMO Org. Chart Significant Events

Logistics Division Organization

The Logistics Division is one of three Divisions within the Program Manager for Ammunition Office at Marine Corps Systems Command. The primary function of the Logistics Division is to act as an "enabler." (See Figure 1 for Log Div organization.) Specifically, the Log Div mission is to enable Class V support in the functional areas of MAGTF planning, operations planning, explosives safety program management, and environmental compliance for ground munitions. The Logistics Division is comprised of three teams listed below.

* Operations Team. Provides general support for Second Destination Transportation (SDT), Title 10 Security Assistance programs, Geo-Positioned stock program management, SDT and day-to-day operations of PM AMMO.

* Plans Team. Coordinates, and performs the planning of operational logistics support of the Op Forces and the supporting establishment.

* Environmental & Explosives Safety Team. Provides environmentally compliant, explosives safety support throughout the munitions life cycle.

Operations Enduring Freedom / Iraqi Freedom (OEF/OIF) brought to light several issues in each Log Div team that could improve overall efficiency and service to the FMF.

In October 2003, several members of PM AMMO and Log Div will travel to a joint munitions transportation conference to address supportability issues that became readily apparent. The purpose of the conference will be to address lessons learned and positively affect the future of munitions movements and minimize potentially adverse impacts that can be eliminated from the process through effective communication.

Prior to the commencement of OIF, PM AMMO developed a skeletal plan for regeneration, reconstitution, and retrograde (R3) of munitions to support the Marine Corps mission post-conflict. In short, R3 is designed to effectively replace munitions expended or damaged during OIF in preparation for the next mission. Upon completion of the plan which coincided with the declared cessation of hostilities, (May 1, 2003) the plan began to go into effect. The Plans Team article provides details of the R3 plan and the overall contributions and savings realized by the Marine Corps.

OIF clearly illustrated the need to infuse explosives safety early on in tactical situations and that we do not fight like we train when it comes to explosives safety. During OIF, MARCENT requested explosives safety support due to the number of munitions related incidents. Log Div deployed the Environmental and Explosives Safety (EES) Team Lead, Captain Mike Campbell earlier this year to provide expertise and guidance to preclude further munitions-related incidents from occurring.

Captain Campbell directly precluded at least two munitions incidents from occurring and proved instrumental in coordinating large-scale unserviceable munitions destruction operations. As the result of lessons learned from OIF based on Captain Campbell's input, during the July 03 Executive Safety Board, I

recommended the creation of a Tactical Explosives Safety Officer position with the EES team.

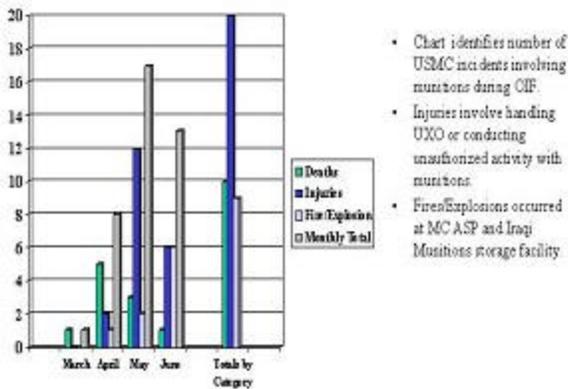


Figure 2. OIF USMC Munitions Related Incidents

The Tactical ESO’s primary responsibility will include participating in training exercises CONUS and OCONUS as well as during contingencies to ensure explosives safety requirements are addressed outside of garrison.



Figure 3. Blount Island Explosives Safety Risk Area

Shifting gears back to CONUS and the supporting establishment, Log Div has provided technical support to HQMC I&L for the Blount Island Acquisition Project. Blount Island Command (BIC), the hub of the Marine Corps’ geo-positioning operations, conducts all munitions on loads and offloads in accordance with the terms of a Secretarial Certification (Sec Cert). The Sec Cert at BIC is the result of the Net Explosives Weight (NEW) loaded on MPF vessels encumbering facilities and personnel unrelated to the munitions operations. Specifically the encumbrances affect the Blount Island commercial sector that includes, BF Goodrich, the Jacksonville Port Authority (JPA), and the Jacksonville Electric Authority (JEA).

During maintenance operations, the Explosives Safety Risk Area encumbers adjacent properties as the result of munitions on or off loaded. Since some the adjacent properties are not controlled by the Marine Corps, DoD explosives safety regulations require a Secretary of the Navy (SECNAV) Certification of operational necessity.

To eliminate the need for the Sec Cert, HQMC set out to acquire restrictive easements on adjacent encumbered private properties owned by BF Goodrich and Jacksonville Port Authority (JPA). Agreement is also imminent on an easement over land owned by the Jacksonville Electric Authority (JEA). These easements allow the Marine Corps to minimize and control risk during munitions operations by reducing the number of unrelated personnel in areas encumbered by the Explosives Safety Risk Area.

The BIC Acquisition Project involved regularly briefing emerging probabilistic explosives safety criteria to SECNAV, members of Congress, the HASC, SASC, and to the City of Jacksonville authorities. Since BIC could not obtain a DDESB site approval using the quantity distance requirements, we used the Safety Assessment for Explosives Risk (SAFER) probabilistic risk model to determine the maximum allowable number of unrelated personnel during munitions operations.

Ultimately SAFER enabled us to comply with the SECNAV objective of meeting explosives safety requirements while minimizing potential impacts to commerce. Additionally, SAFER proved very useful as a management tool by enabling us to determine the maximum number of allowable unrelated personnel inside the risk area for each stakeholder as well as how risk would be affected by relocating facilities outside of the risk area. Figure 3 depicts Blount Island and the green arrows identify buildings being relocated as a result of SAFER analysis. Once the buildings are relocated, the DDESB site approval (using SAFER) will go into effect and eliminate the need for the Sec Cert.

¹ **Note:** Typically the term explosives safety quantity distance arcs has been used to refer to explosives encumbrances, however SAFER outputs yield risk areas defined by pass/fail criteria based on a statistical output rather than a quantity-distance arc.

Future Initiatives

The upcoming MPF Tailoring Conference offers a unique opportunity to truly meet the needs of the war fighter. Our focus as the ground ammunition community will be to develop recommendations enabling loading of assets that will increase the amount of munitions to support the primary weapons platforms of a MEB.

As previously mentioned, we look forward to the JMC transportation conference to streamline joint munitions transportation to realize efficiencies and ensure Marine Corps interests are met.

Marine Corps Orders

Currently, MCO P8020.11/OPNAVINST 8020.14, MCO P8020.10A, MCO 8023.3B are in the rewrite process. As you may recall none of these recent directives are more than 3 years old. However, due to the dynamic nature of the contents they are being revisited to incorporate change and remain relevant. I encourage you to review and comment during the staffing periods.

A significant new area emerging in the explosives safety arena is the "Explosives Safety Submission" Process. Please do not confuse this "ESS" with the Electronic Site Submittal software that PM AMMO is funding to install software at ALL Marine Corps installations within the next 2 years.

The Explosives Safety Submission entails development of a plan to ensure explosives safety considerations are taken into account (and approved by this office and the DDESB) if Marine Corps lands being transferred from our control or put to incompatible use are known or suspected to be contaminated with munitions. The ESO is critical in this process and should consult the installation environmental office to ensure open communication on all projects.

Upon receipt of an ESS, Log Div solicits comments and recommendations from HQMC I&L (LFL), CL and MCCDC TECOM Ranges and Training Area Management Div.

MCO 8020.13 addresses this process and we anticipate ACMC signature by 1 Oct 2003.

Ammunition Conference. Exact dates and location TBD. Based on recent events this conference

promises to be like no other...stay tuned for additional details.

Conclusion

The Logistics Division mission is varied and cuts across several areas with very different needs and requirements. At the end of the day, all are interrelated and integral to the overall success of providing safe and effective munitions to our Marines.

Mr. Chiapello is currently assigned to MCSC-PM AMMO, is the Head of Logistics Division, and may be reached at DSN: 378-3170, e-mail: ChiapelloTL@mcsc.usmc.mil

Environmental and Explosives (EES) Safety Team

Mr. Morrison, MCSC, PM AMMO, EES Team

The EES Team, as a member of the Logistics Division under the Program Manager for Ammunition, has a broad area of responsibility that includes not only Marine Corps Environmental and Explosives Safety Program management and policy, but also carries into aspects of Logistics Operations, Quality Assurance, Acquisition, Research & Development, and munitions disposition (for unserviceable/waste) & demilitarization

EES derives its mission from the MCO 5100.29 which directs MCSC to, "Implement the Marine Corps Environmental and Explosives Safety Program and represent the Marine Corps on the Department of Defense (DoD) Explosives Safety Board (DDESB) and DoD level groups, boards, committees, or other organizations that address explosives." direction to EES Team functions are divided into several broad categories with a number of supporting subtasks.

Categories include:

- * Policy,
- * Customer service,
- * Partnering, and
- * Process improvement

This article describes each of these functions in detail.

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The *Policy* function includes developing and maintaining Marine Corps explosives safety requirements. Further, EES ensures Marine Corps explosives safety requirements are addressed in DoN and joint policy regulations. Typically this policy-making includes the DDESB, the Joint Ordnance Commanders Group (JOCG), and the Operational and Environmental Executive Steering Committee for Munitions (OEESCM).

Tasks supporting policy development and maintenance include: identifying the need for new/revised policy through periodic review of existing regulatory requirements; response to policy changes at headquarters or DoD levels; and response to significant feedback from customers.

Additional actions include conducting research on existing policy/regulations, researching or eliciting DoD and other Service positions as, and soliciting input from users and effected organizations.

The policy function is completed by drafting policy and accompanying guidance, staffing draft policy internally and externally, incorporating changes, staffing the finalized document, and promulgating policy.

Customer Service

Perhaps the most important function of Team EES is Customer Service that is comprised of internal and external services.

Internal service entails:

- * Providing technical support to other MCSC/PM AMMO Divisions.
- * Conducting research, preparing point papers, background papers, presentations, and briefings.

External service entails:

Support of non-MCSC/PM AMMO organizations to include FMF, HQ USMC, other Services, and the Office of the Secretary of Defense (OSD). Subtasks include:

- * Conducting research
- * Providing concurrence, review and recommendations for safety site plans
- * Proposed corrective action plans, draft/revise publications, and Safety/Environmental inspection reports.

EES also provides technical assistance in the following area:

- * Technical information/data,
- * Conducts Staff Assistance Visits,
- * Conducts training,
- * Supports various IPTs, Tiger Teams and Working Groups,
- * Participate in forums that require our input or have significant impact on Marine Corps operations,
- * Participates in, or conducts Explosives Safety Inspections and support HQMC (I&L) for Environmental Compliance evaluations.

Partnering

Another major function of EES, Participating in Committees, Working Groups, Boards, and Councils, crosses over to both Policy and Customer Support areas and occupies a significant portion of the EES workload. EES serves on the following:

- * Operational Environmental Executive Steering Committee (OEESCM)
- * OEESCM, Munitions Stockpile Management Subcommittee
- * OEESCM, Range and Munitions Use Subcommittee
- * OEESCM, Acquisition Subcommittee
- * DoD Hazardous Waste Subcommittee
- * DoN Strategic Plan Measurability and Risk Management Committee
- * JOCG Ordnance Safety Subgroup
- * JOCG Environmental/Demilitarization Subgroup
- * Ammo Quality Management Board Explosives Safety Group
- * DDESB Risk-Based Explosives Safety Criteria Working Group
- * JOCG HERO Subgroup
- * DoN Strategic Plan Documentation Committee
- * DDESB Commercial Facilities on Military Installations Working Group
- * DDESB Plain Language Rewrite of DoD 6055.9-STD Working Group
- * JOCG Human Resources Subgroup

Archives/Records

As the HQMC Explosives Safety Program office, a very important function is to ensure accurate

records are maintained. Archives/Records maintenance includes:

- * Maintaining up-to-date historical documentation files of explosives safety related activities for each major customer (Base data), maintaining a current library of research publications and regulations, attending required professional training, preparing a variety of correspondence/Naval messages, tracking progress of open projects/issues, conducting follow-up action, and maintaining the historical database for Designated Disposition Authority (DDA) instructions.

Process Improvement

Since PM AMMO established the EES team in 1995, the Marine Corps has become increasingly ingrained in the DoD explosives safety arena. During the eight-year period, explosives safety processes, agency roles and responsibilities, as well as lines of authority and communication have evolved and matured throughout the DoD as well as the Marine Corps. Accordingly, ESS has focused extensively on Process Improvement. Due to high tempo, much of our time can, if permitted, be spent “fighting fires.” However, unless we address the reason for the fire, chances are that the fire will simply start elsewhere. EES efforts have focused on automating virtually all information and reducing steps in processes to a minimum while retaining the integrity of the process.



Our Improvement model has evolved into two broad areas of focus, internal and external projects.

Internally, our focus is on improving program management tools. We are streamlining internal processes; developing databases to track correspondence/reports, monitor trends in inspection findings, maintain waiver/deviation data, and compile

data on a by-base basis. Similarly, we are moving to electronic filing, and making better use of electronic media to speed response to customers wherever possible.

Externally, we are determined to provide up-to-date tools for our Explosives Safety Officers (ESO) to maximize the effectiveness of their base level programs. The first effort in building a toolkit was to rewrite our basic Explosives Safety Program guidance publication MCO P8020.10A. Our initial effort greatly expanded



the Order to include Marine-specific guidance that amplified/modified NAVSEA OP5 guidance to more closely reflect Marine Corps requirements. Additionally, we included a new qualification/certification process for ESO’s, established specific training requirements for ESO’s, and added a waste munitions management chapter. Currently, work is being completed on Change 1 to MCO P8020.10A and it will be ready for staffing in the near future.



Another addition to the toolkit is SAFER (Safety Assessment for Explosives Risk). The future of explosives safety lies not in regulations/tables/charts. The future is in risk assessment/management and minimization. SAFER is the quantitative computer

model, developed through joint Service/DDESB/contractor effort that is moving us in that direction. Originally conceived as a site-planning tool for use in eliminating waivers, and in situations where traditional Quantity-Distance requirements could not be met, SAFER is evolving into risk management applications. Although the DDESB approved SAFER for trial use in Quantity-Distance site planning, the Marine Corps is the only Service to put this tool into the hands of explosives safety managers at the base level.



In FY 2002 EES funded and scheduled the required contractor-conducted training for all USMC ESO's in order to put this tool in the hands of the user.

Our newest tool, Electronic Safety Siting (ESS) is moving out to USMC bases. PM AMMO is funding for ESS installation at Marine Corps locations. ESS is a suite of computer software programs that works in conjunction with base facility databases and digital mapping to generate a complete explosives safety site plan that can be electronically transmitted through the approval



chain. Anyone who has spent days/weeks manually calculating quantity-distance requirements, searching tables, drawing ESQD arcs, and waiting months for the package to get through the approval chain will

appreciate the quantum leap forward ESS provides in saving time/effort in the site process. EES is working with Naval Facilities Engineering Service Center and scheduling installation of ESS at all USMC bases. Work is underway at MCAS Miramar, MCB Quantico, and MCB Camp Lejeune. The plan is to follow on with at least one base per quarter until completion. We are also exploring making ESS web-based to further speed the installation process.

This is a brief overview of who we are, what we do, and where we are going. Team EES is ready to assist you; we're just a dial tone or a couple of mouse-clicks away. EES-Building Success.

Mr. Morrison is currently assigned to the MCSC-PM AMMO-EES Team and may be reached at DSN: 378-3148, e-mail: MorrisonGE@mcsc.usmc.mil

Plans Team

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

The Plans Team is organized within the Logistics Division at Marine Corps Systems Command (MCSC), Program Manager for Ammunition (PM AMMO). Our primary mission is to plan and coordinate ammunition support to the operating forces during contingencies. As an implied task, we assist in planning support for training ammunition in anticipation of conflict.

Whether executing an Operation Plan (OPlan) participating in a Major Theater War (MTW) or a Contingency Plan (ConPlan), support to a small Scale Contingency, the coordinated efforts prior to execution minimize confusion and ensure effective ammunition support. Recently, our planning effort changed to execution during Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). When an OPLAN is being executed the Plans Team functions as the single point of contact for all information and tasks associated with support of Class V(W) to the Operating Forces. A formal notification by Naval Message to all supporting and supported commands was released to establish the PM AMMO Crisis Response Cell (CRC). Although many of the details of support are classified, this article generally describes the Plans Team actions before, during, and after OEF, and subsequently OIF.

Requirements Determination Phase

The first of many steps in this process is the Requirements Determination Phase conducted by the Operating Forces. The Marine Component Commander (in this case MARCENT) consolidated all requirements, subtracted War Reserve Material Stocks, Force Held (WRMS-F), - commonly referred to as Apportioned War Reserve, Marine Ammunition Requirements Support Order (AWR MARSO)- and then passed remaining shortfall list to the CRC. The shortfall, or unsourced requirement was globally sourced from War Reserve Material Stocks In-stores (WRMSI). All requirements that were to be supported from depots were built into the Time-Phased Force Deployment Data (TPFDD) using Unit Line Numbers (ULNs). The Plans Team built the ULNs by inputting data into the Marine Air Ground Task Force II (MAGTF II) Logistics Automated Information System (LOG-AIS). All data entered into MAGTF II associated with Oplan/ConPlan becomes classified. Upon completion of data input and internal ULN validation, the MAGTF II file was exported and sent via classified network to MARCENT. In turn, MARCENT G-5 planners import the file and check it for critical errors. A representative from Plans and the MARCENT planners attended the TPFDD validation conferences hosted by US Transportation Command (USTRANSCOM), Scott AFB to determine if the transportation network can support the Combatant Commander's total requirements for movement (transportation feasible). After running the transportation model and determining if the TPFDD is feasible, the Combatant Commander locked the plan and no further refinements were allowed. At execution, the plan is unlocked by the Combatant Commander, adjusted and revalidated based on the actual flow of forces and equipment.

After a deployment order for Marine forces was validated through the Office of the Secretary of Defense, MARCENT requested validation and movement of the ULNs to Central Command (CENTCOM) through a news group message in Joint Operation Planning and Execution System (JOPES). CENTCOM validated the ULNs in JOPES and forwarded a newsgroup message to USTRANSCOM for validation. Once validation was received from both CENTCOM and USTRANSCOM, MARCENT sent a withdrawal message to HQMC in accordance with MCO P4400.39H. HQMC re-addressed the message to COMMATCOM, which requested MCSC take for action. The ammunition requisitions were sent to the Joint Munitions Command (JMC). Upon receipt of the

requisitions the depots commenced packaging and containerization of the ammunition for movement.

When the ammunition was packaged and readied for movement to a designed Sea/Air port of Embarkation (SPOE/APOE) the Joint Munitions Transportation Coordinating Activity (JMTCA), the responsible agency for all in-land and OCONUS shipments, directed the movements. All assets to be moved by sea were sent either by rail or truck to the SPOE, Military Ocean Terminal Sunny Point (MOTSU). Ammunition designated as "Fly in Echelon" were packaged and moved to the designated APOE. Ammunition moved by air was shipped out of Charleston AFB, Dover AFB, or Cherry Point MCAS.

At the request of MARCENT (G4/Ammo), a member of the Plans Team was sent to MOTSU during the loading of containers as an embarkation enabler and to provide "real time" status. That decision proved to be the single most import piece in the coordination effort and will be considered as a potential requirement for future movements. The Plans Team, using various tracking systems, closely tracked daily status of all shipments and provided updates internally to MCSC as well as external to many agencies, including Headquarters Marine Corps (HQMC), and MARCENT.

The total movement of ammunition, although frustrating and chaotic at times, actually proved to be successful and lent itself to validate many support concepts. Further, it allowed for development of lines of communication, clearly established that ammunition is a very important class of supply in the deployment and employment of Marines, and that it is a very cumbersome and costly process to move ammunition. The Marine Corps moved in excess of \$1.1 billion dollars of ammunition in support of OEF/OIF. Since this was the first time since Operation Desert Shield/Desert Storm (DS/DS) that we have had a requirement to move ammunition, some procedures were not up-to-date and needed refinement.

Retrograde, Reconstitution and Regeneration (R3)

As soon as our efforts to provide sustainment to the operating forces concluded and prior to Marines firing the first round during the conflict, the Plans Team shifted gears to our next big effort. Retrograde, Reconstitution and Regeneration (R3), also known as "reset" in the joint community. MCSC (AM), in coordination with MARCENT (G-4 Ammo) was directly responsible for the planning, integration, and

execution of the ammunition R3 operations. Many things had to be considered during the deliberate planning for R3, not the least of which involved identifying Contractor Logistic Support (CLS) requirements. The key to success was to establish the right balance of Marine to civilian work force ratio that would work best for all, and effectively support the R3 mission. During DS/DS close to 200 CLS personnel were involved with the packaging and re-containerization of billions of dollars of ammunition. As the result of very good pre-planning and limited break out of ammunition during OIF, only limited numbers of munitions require repackaging. Therefore, only 35 CLS were required to support OIF R3. Through continuous dialogue with the Combined Forces Land Component Commander (CFLCC) G4 representative and PM AMMO (Plans), we were able to include OT COG ammunition into the Army R3 saving the Marine Corps labor cost since Marine Corps is only paying for material cost of repackaging. This contract has the potential to save the Marine Corps millions of dollars in un-programmed funds.

The most important and final phase of the entire operation will be the consolidation of lessons learned. This is a critical piece of the puzzle in improving procedures for the next contingency, wherever that may be.

Additional Duties

In addition to supporting operation forces during the contingencies, MPF support and tailoring participation in the joint focused logistics war game, the Plans Team is involved with additional functions including: submission of the Quarterly Readiness Report to Congress (QRRC), and providing input on various initiatives such as the Ammunition Logistics Focus Team. Since PM AMMO manages the entire life cycle of ground ammunition, Op tempo is usually hectic and if allowed can detract from our true mission. However, our focus is, and always will be, to provide the right ammunition to the right location, on time, in support of the Operating Forces.

LtCol Dachman, Team Lead and CWO3 Emminger Plans Officer are currently assigned to the MCSC-PM AMMO-Plans Team and may be reached at DSN: 378-3141 or 3140, e-mail:

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Operations Team; Single Point of Entry for Coordination

Mr. Lettinhand, MCSC-PM AMMO-OPS Team
Lead



The Operations Team, as part of the Logistics Division under the Program Manager for Ammunition, serves as the single point on entry for coordinating all internal and external customers actions in support of the Marine Corps mission related to ground ammunition (Class V (W)). The Operations Team coordinates matters affecting operations, planning, organizational staffing, human resource management and facilities for the Program Manager For Ammunition issues. Additionally, the Operations Team is responsible for providing oversight management in the following areas:

- * Second Destination Transportation (SDT)
- * Norway Air Landed Marine Expeditionary Brigade (NALMEB)
- * Liaison Program
- * Foreign Military Sales Program
- * MOS Sponsor for 2311
- * Coordinate all incoming/outgoing action/info items
- * Administrative support/information

Second Destination Transportation (SDT)

In October 2001, the Program Manager for Ammunition office was designated by HQMC, LPD as the Office with Oversight Management responsibility or Executive Agent over that portion of the Marine Corps'

Second Destination Transportation (SDT) funds used to transport ground ammunition in support of the Marine Corps Training, Marine Ammunition Requirement Support Orders and Pre-positioned War Reserve strategies. This allowed for more flexibility in planning and executing ground ammunition movements in support of Marine Corps Forces for training and contingencies. Members of the Operations Team were assigned as the principal agent for the Program Manager to evaluate SDT funds expended on the movement of ground ammunition. Operation Team members track and monitor shipments via Power Track software. Power Track is a Department of Defense (DoD) tool use to centralize tracking of DoD asset shipments. Information is downloaded from Power Track and placed in a locally developed database for comparison against valid Marine Corps Transportation Account Codes (TAC). If the information on current shipments is accurate no action is taken, however, if the information is incorrect then the appropriate TMO is notified of the discrepancy for action. Discrepancies usually include:

- * Billing to the incorrect TAC (95%)
- * Billing to the incorrect Line of Accounting (5%)

Norway Air Landed Marine Expeditionary Brigade (NALMEB)

The Operations Team monitors inventory levels, track shipment and provide oversight of the maintenance program for the NALMEB Program supporting Class V (W) assets pre-positioned in Norway. In support of the Class V (W) aspect of NALMEB, Operations Team personnel lead the Reserve Augmentation Group (RAG) Teams. RAG teams reduce the number of Norwegian man-hours required for containerization work and packaging/reworking of munitions. Additionally, members of the Operations Team provide assistance to Headquarters Marine Corps, Deputy Commandant for Installations and Logistics on any matters pertaining to Class V (W) assets in the NALMEB program. Operations Team members served as a contributing members of both the Ammunition Sub-Group (ASG) and the Prepositioning Equipment Management Group (PEMG).

Liaison Program

The Operations Team provides oversight to the Program Manager for Ammunition Liaison Program in support of 16 liaisons, 1 Joint Billet, 1 FMFEUR/MARFOREUR, 4 Army activities, 10 Navy

activities (7 CONUS/3 OCONUS). Typically Liaison Officers participate in, coordinate, and respond to joint and operational planning exercises related to PM AMMO's mission. Additionally, they serve as the PM's eyes & ears for the broad USMC ammunition mission.

Foreign Military Sales Program

The Operations Team processes requests from Marine Corps Systems Command, International Program Office (IPO) in support of the Foreign Military Sales Program. Support to the IPO Office includes:

- * Providing internal and external coordination
- * Providing for pricing and availability
- * Coordinating transportation and delivery through the Joint Munitions Transportation Coordinating Activity.

Title 10 USC Program

The Operations Team is responsible for coordinating all requests for support of the Title 10 USC Programs in support of developing countries as well as ammunition support for other government agencies. This support includes:

- * Providing internal and external coordination
- * Providing pricing and availability
- * Transportation and delivery

Military Occupational Specialty (MOS) Sponsor

The Operations Team is the Technical advisor to the Deputy Commandant for Manpower, Force Structure, and Table of Organization (T/O). The Operations Team is responsible for developing and submitting modifications to the Marine Corps System Command's (T/O), specifically for the 2311 MOS. Additionally, Operations Team members interact with the 3043 MOS monitor in the identification of supply personnel to be assigned to PM AMMO. As the technical advisor functions includes:

- * Providing management of related training functions regarding specialized skills, and training requirements for MOS skills.
- * Providing guidance to Manpower to revise plans by providing advice, proposals and evaluations for our MOS.
- * Gathering information from the commands and propose skills changes and submit them to HQMC.

- * Reviewing and submit changes to the Training Input Plan (TIP) these are allocated seats for MOS schools.
- * Providing Manpower all Non-MOS producing career level and functional training requirements every three years i.e. "B" billet requirements.
- * Reviewing and evaluate proposed changes on promotions. Coordinate with monitor on enlisted permanent change of station moves and permanent changes of assignment.

Coordinate all incoming/outgoing action/information items

The Operations Team serves as the single coordination entry point for all incoming/outgoing action/information items for PM AMMO. This includes:

- * Messages
- * Timekeeping
- * Correspondence
- * Internal and external taskers
- * Joint actions
- * Administrative support actions

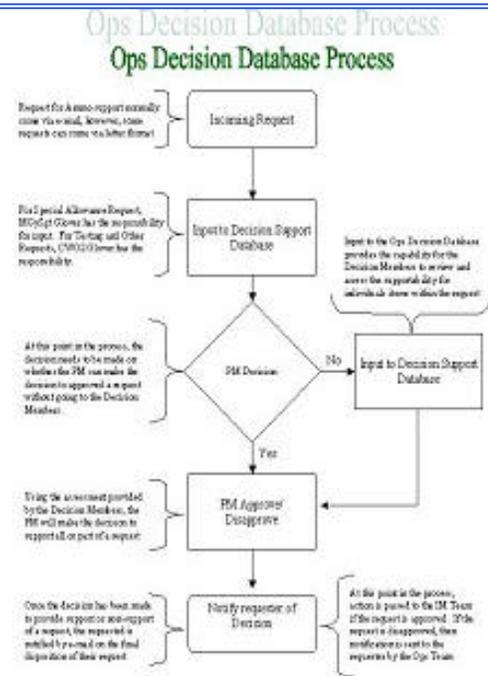
Administrative support/information for civilian personnel

The Operations Team provides coordination for all civilian employment matters for PM AMMO. This coordination includes:

- * Civilian manpower
- * Awards
- * Automated Personnel Actions
- * Military Manpower
- * Training
- * Physical Security

Request for Ammunition Support

To expedite the Ammunition Request approval process, Operations Team members developed the Operations Decision Database to provide PM AMMO Decision Member with an interactive tool for reviewing and approving request. The tool has greatly reduced the time line within the approval process. The following flowchart provides a review of the PM AMMO approval process for ammunition requests:



Conclusion

The Operations Team is committed to providing timely, accurate and effective solutions and support required for military operations as well as all other types of ammunition logistics management processes. The Operations Team is available and ready to assist today's Marines in their real world mission.

Mr. Lettinhand is currently assigned to MCSC-PM AMMO as the Operations Team Lead and may be reached at DSN: 378-3168, e-mail: LettinhandEL@mcsc.usmc.mil



MARINE CORPS LIAISON OFFICER, NAVAL WEAPONS STATION, SEAL BEACH AND DETACHMENT FALLBROOK, CA

**CWO3 Sanders, MCLNO NWS Seal Beach and
Fallbrook**

Once upon a time, there was a Marine Officer who was ordered to report for duty as the Marine Corps Liaison Officer (MCLNO) at Naval Weapons Station, Fallbrook, California. He had never worked at a Naval Weapons Station (NWS) before and had no idea what he was getting into. He had many important questions like: What was the mission of the MCLNO? Who would he be working with? Would he have time for golf? And many other equally important questions.

I am that Marine Officer and just over two years later I finally have the answers to all those questions, or at least I think I do. Anytime I talk to other Marines about this duty assignment they all seem to have the same questions. So, in this article I will attempt to provide enough basic information that you will have a good understanding of what goes on at the Weapons Station and what the main functions of the MCLNO are. To answer one of the most compelling questions first; yes there is adequate time for golf. It just happens to be all on Saturday, Sunday, or holidays!

You may be asking yourself, "Where exactly is Fallbrook?" If you have ever been to Camp Pendleton you probably know that NWS Fallbrook is on the eastern border of Camp Pendleton and is located approximately fifty miles north of San Diego. One of the first surprises of this billet was the fact that the scope of duty is not limited to Fallbrook but also includes NWS Seal Beach, which is located about 75 miles north of Fallbrook along Interstate 405 near Longbeach, CA.

Before we get into exactly what the MCLNO does, let us talk a little about the Weapons Stations. The official title of NWS Fallbrook is NWS Seal Beach, Detachment Fallbrook. This is because Seal Beach is the parent command of Fallbrook. Seal Beach also has detachments in Concord, CA and San Diego, CA. According to the NWS Seal Beach web site (<http://www.sbeach.navy.mil>) the mission of NWS Seal Beach and its three detachments is to "provide weapons storage, loading, maintenance and support to ships and submarines of the United States Pacific Fleet. Our facilities also service Coast Guard vessels and Marine Corps units stationed afloat and ashore". The primary support of Marine Corps units is in the form of ammunition, explosives, and related material, both Class V (A) and Class V (W), supplied to USMC units embarked aboard U.S. Navy amphibious warships. Typically these units are the 11th MEU, 13th MEU, and 15th MEU.



USS OAKHILL LSD-51

What exactly does the MCLNO do? The primary function of the MCLNO is to act as a representative of the Program Manager for Ammunition (PM-AM) and assist the weapons station personnel in the management of the Class V (W) ammunition, which is stored at NWS Seal Beach and Detachment Fallbrook. The number one goal of this effort is to ensure that the weapons station has an adequate supply of Class V (W) on-hand to be able to support the MEU with a 15-day supply of ammunition for use as Landing Force Operational Readiness Material, or LFORM. What is LFORM you may be thinking? Simply put, LFORM is the war reserve munitions that are loaded aboard the amphibious ships that transport the MEU during its deployment. This is the ammo that the MEU will use if they are called into action.

Typically a MEU will deploy as part of an Amphibious Ready Group (ARG), which is comprised of three ships. The ARG will have one Amphibious Assault Ship (LHA or LHD), one Amphibious Transport Dock (LPD), and one Dock Landing Ship (LSD). More information about these ships can be found at <http://www.chinfo.navy.mil/navpalib/ships>.



Ammo VERTREP

Experiments are currently underway which could change the composition of the traditional ARG. In these experiments the ARG is being supplemented with a guided-missile cruiser, a guided-missile destroyer, a frigate, a fast-attack submarine, and a P-3 Orion surveillance aircraft. This group of seven ships is known as an Expeditionary Strike Group or ESG. The 13th MEU will make their next deployment as part of ESG-1.



Ammo VERTREP Lift

One of the primary tasks of the MCLO is to ensure that the LFORM is loaded aboard the ARG. The LFORM package loaded aboard the ARG is designed to be able to sustain combat operations for fifteen days.

This LFORM load is split between the LHA and the LPD, the two largest ships of the ARG. Two-thirds (or 10 days supply) of the LFORM is loaded onboard the LHA/LHD. The remaining one-third (5 days supply) is loaded onboard the LPD. Due to its limited storage space the LSD does not normally carry LFORM onboard.

How do we get the LFORM ammo onboard? Getting the LPD loaded is a fairly simple task. The ammunition for support of the LPD load is stored at NWS Seal Beach. Therefore, the ship simply pulls alongside the wharf at NWS Seal Beach and the ammo is loaded onto the ship via a crane.



Ammo VERTREP transport

Getting the LHA or LHD loaded or unloaded is a much more complex matter. Because the wharf at Seal Beach is not large enough to support the LHA or LHD these ships cannot be loaded at wharf. This is the reason that the ammo for these ships is stored at Detachment Fallbrook.

A quick look at a map will reveal that Fallbrook is about 20 miles inland from the Camp Pendleton coastline and that there are no piers or wharfs where the ship could dock. So, how do we get the ammo from Fallbrook to the ships? The answer: vertical replenishment, or VERTREP. VERTREP is the practice of using helicopters to transport the ammo from the shore to the ship.

The ammunition, about 1200 pallets for a full LHA or LHD load, is transported via truck from Fallbrook to Camp Pendleton's LZ Viewpoint. Here the pallets will be externally lifted by a U.S. Navy helicopter, usually a CH-46 or SH-60, and flown to the ship which will be waiting approximately 2 miles

offshore. Generally it takes 4 to 5 days to complete a full on load or offload.

The task of loading or unloading an ARG involves many different commands. A high degree of coordination between many different groups including Commander, Naval Surface Force Pacific (SURFPAC), Commander, Amphibious Group Three (CPG-3), AMMOPAC, I-MEF and, of course, the ship(s) being loaded (unloaded) is required. It is the responsibility of the MCLO to work with each of these commands to ensure that the required LFORM ammo is where it needs to be when it needs to be there.

The job of the MCLO is not over once the ammo is loaded on the ship. During the ships deployment the MCLO will stay in contact with the ship's personnel to assist with any questions or problems that may arise involving the LFORM ammo. I also provide any assistance to PM-AM that may be needed to accomplish various other tasks, i.e. required maintenance or testing of specific ammunition items.

If you have any questions and/or comments I can be reached at DSN 873-3645 or via email at sanders.mickey@sbeach.navy.mil

CWO3 Sanders is currently assigned as the MCLNO NWS Seal Beach and Fallbrook and may be reached at DSN: 873-3645, e-mail: <mailto:sanders.mickey@sbeach.navy.mil>

40mm Mk 281, Mod 0 Target Practice Cartridge (DODIC BA12)

Mr. Miller, MCSC -PM AMMO-IWA

Editor's Note: This is an update to an article previously published in the Ammunition Quarterly in April 2001.

The Marine Corps has successfully fielded a new linked 40mm Target Practice (TP) cartridge for use in the Mk19 Grenade Machine Gun (GMG). This cartridge, designated the Mk281, Mod 0 (DODIC

BA12), is intended to replace both of the current 40mm linked TP cartridges; the M385 variant (DODIC B576) and the M918 (DODIC B584). DODIC B584 uses a fuze escapement mechanism to produce a visible signature on impact that in the past has been prone to malfunctioning and produces duds. The dud rate of the B584 cartridges led to the re-procurement of B576 for training on the Mk19 GMG. While B576 does not produce duds, it has a major shortcoming of not producing a visible signature on impact.

The Mk281, Mod 0 TP cartridge is the result of an effort to eliminate duds on training ranges and to obtain a cartridge that produced a visible signature. The Mk281, Mod 0 produces a visible impact signature at ranges in excess of 1500 meters without the use of energetic material and, therefore does not produce duds. The cartridge case uses the same M2 propellant and the same primer as the existing TP round. The non-explosive compound used to produce the signature has passed all environmental and safety tests. The Weapon System Explosives Safety Review Board provided safety approval for the production and release for Fleet use of the cartridge on 9 April 2003. The cartridge was released for full fielding on 30 April 2003.



BA12 CTG Linked in container

The Mk281, Mod 0 TP cartridge is easily recognized by the presence of a blue plastic nose cap and projectile body. The cartridge is packaged 32 cartridges per belt in the PA120 can; the same configuration as DODIC's B576/B584. The cartridge uses the same M16A2 link as the existing Mk19 GMG family of ammunition. The Mk281, Mod 0 is also easily distinguishable by the absence of a base plug on the cartridge case.



Mk19 firing BA12 at Quantico

Product improvement efforts to increase the capabilities of the Mk281, Mod 0 continue. The Marine Corps is currently working with the German manufacturer of the cartridge (Nico Pyrotechnik) to provide a day/night marker capability for inclusion in the existing cartridge. OmniGlow Corporation (located in Springfield, MA) has produced a non-energetic, environmentally safe compound that produces a visible signature at ranges in excess of 500 meters in darkness. By mixing the existing orange dye with the OmiGlow product, the Marine Corps will be able to utilize a single cartridge visible in the daylight to a minimum of 1,200 meters and visible at a minimum of 500 meters in darkness without the use of energetics.



BA12 CTG impacting armored target at 1,200m

The propulsion system used in the Mk281, Mod 0 cartridge case utilizes a significant different design over the previous 40mm high velocity cartridges. The Mk281, Mod 0 design features a projectile and cartridge case that is tightly screwed together by a thread at the vent hole assembly. On firing, the propellant in the high-pressure chamber is ignited and gas flows through the vent holes into the low-pressure chamber. When a certain pressure is exceeded, the thread breaks at a predetermined point and the projectile starts to move. This design allows for an extremely consistent muzzle velocity; thereby greatly reducing the dispersion and significantly increasing the accuracy of the weapon system. The design of this propulsion system is currently being considered for inclusion in a product improvement program to replace the existing M430 high explosive dual purpose (HEDP) cartridge (DODIC B542).

In summary, the Mk281, Mod 0 TP cartridge provides a viable alternative to the two existing 40mm TP cartridges for the Mk19 GMG; reduces the number of configurations in the inventory; eliminates the danger with duds on training ranges; and provides an enhanced training capability to the Marine in the field.

Mr. Miller is currently assigned to the MCSC-PM AMMO-IWA Team and may be reached at DSN: 378-3154, e-mail: MillerRM@mesc.usmc.mil

Camp Schwab Container Operations

CWO2 Donnell, OIC, ASP, Camp Schwab

The Ammunition Supply Point (ASP), Camp Schwab, Okinawa, Japan has a unique task a couple of times a year: we are the only Ammunition Company in the Marine Corps that containerizes ammunition in 20 foot International Organization for Standardization (ISO) containers. Once loaded, the ammunition containers are used for off island training in various exercises. These exercises include: Cobra Gold in Thailand, Balikatan in the Philippines, and Crocodile in Australia.

The ASP requires the units participating in the exercise to submit their requirements to III Marine Expeditionary Force (MEF) G-4. III MEF then compiles the items into a consolidated MILSTRIP and

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forwards it to the ASP at least 30 days prior to the ship arriving to load the containers.

Once the ASP receives the MILSTRIP, the records section obligates and prints the documents using color-coded paper to ensure the documents stand out as a package and not a regular daily issue. Then, the storage section pulls the ammunition and moves the items to designated magazines to consolidate and prepare the pallets for loading.

After the pallets are built, the ammunition is moved to the ASP's container pad where it's placed into the pre-inspected containers, blocked and braced, and sealed for shipment. Though this sounds like an easy evolution, we have encountered some challenges and learned to develop procedures to correct and alleviate said challenges.



Container Pad

One of these challenges was corrected by using the color-coded paper for the separate packages. We prepared ammunition for Balikatan and Cobra Gold exercises at the same time, which made for a challenge to ensure the right ammunition made it into the correct containers. When we prepared the Crocodile ammunition we decided to use pink paper. There was no doubt what the pink documents belonged to.

Another challenge is the lack of training for the Marines preparing the containers. We have been using Computer Based Training to certify individuals as container inspectors, AMMO-43-CBT, CDROM, but we only recently came across a course to teach them how to pack containers, Course 8B-F2, Defense Packing and Unitization. We are attempting to budget to send Marines to this Army Course. Up to this point, we have

been relying on supervision, Standard Operating Procedures, and use of the Military Standards to block and brace correctly.

An interesting point on preparing containers to send to Australia is their stringent agricultural inspections. The Australians sent an Australian Quarantine and Inspection Service (AQIS) team to Okinawa to inspect all cargo prior to placing it on ship. The ASP had an AQIS inspector assigned to us; he checked for soil and insect contamination. The inspector checked and certified the empty containers, the ammunition, and the dunnage separately. Then as the Marines of Ammunition Company loaded the containers, he inspected the dunnage and ammunition again. He put his seals on all pallets and containers in order to ensure the cargo was not frustrated in Australia.

Unfortunately, after this was completed, Okinawa was hit by a powerful typhoon. This required us to lift up each container to ensure there was no leaf debris or soil contamination on the bottom of the containers. Of course there was. To safely clean the containers, the ASP enlisted the help of the Camp Schwab Fire Department. They brought their fire truck and washed the containers so that they would pass inspection.

Another challenge that we have encountered is the old make due with less, in other words: adapt and overcome. The ASP does not have pneumatic nail guns; the Marines use plain old hammers. Though we have graduated to table saws, we have to transport these tools to the container pad whenever we are containerizing ammunition. We have no building or storage space on the container pad.

Even with all of these challenges and the lack of equipment, the Camp Schwab Ammunition Company Marines complete the mission at hand and do so always keeping explosive safety in mind.

CWO2 Donnell is currently assigned as the Officer In Charge of the Camp Schwab ASP located in Okinawa, Japan and may be reached at e-mail:

DonnellJN@3FSSG.usmc.mil



MCB Quantico, Supporting the National Capitol Region

CWO3 Frappier, OIC, Ammunition Supply Point
MCB Quantico



Ammunition Supply Point, Quantico

The Quantico Ammunition Supply Point (ASP) has gone through various changes over the years. During the recent Marine Corps Base (MCB) Quantico G-4 Logistics Division Reorganization, an Ammunition Support Branch was established directly reporting to the G-4. Prior to this reorganization, the ASP reported to the G-4 via Material Branch. Our primary mission is to provide ammunition support to the Tenant Activities, Organizations, DoD Agencies, Reserves, and support for Memorandums of Agreement's (MOA's), Memorandum of Understanding (MOU's), and Inter-Service Support Agreements (ISSA's) with the Federal Bureau of Investigation (FBI), United States Secret Service (USSS), Capitol Police, and other DoD and Department of Justice (DoJ) Agencies within the National Capitol Region (NCR).

In order to support the increased requirements and commitments, a Three Phased MILCON Project was finished a couple years ago significantly enhancing ammunition storage capabilities to support the National Capitol Region. The ASP encompasses approximately 100 acres with (2) Inert Storage buildings for storing MHE, operational tools and equipment, empty boxes, cans, and lumber. Since the MILCON completion, the ASP has 26 Storage Magazines with 11 magazines having Intrusion Detection System (IDS) capability. Recently, the Department of Defense Lock Program

were installing and testing a new Internal Locking Device (ILD) on magazines throughout our Corps, one of which was located at Quantico. Additionally, there are (2) Aboveground Fuel Tanks capable of housing 250 gallons of Diesel and Unleaded Gasoline to service ASP vehicles only.

The ASP has 13 Marines trying to cope with an increasing demand for support. Last year alone, the ASP processed more than 20k issue, receipt, and shipment transactions that were reportable to Marine Corps Systems Command and an additional 2k local transactions. Within the last 2 years, the requirement to support DoD and DoJ Agencies within the National Capitol Region has more than tripled. Currently, there are (8) MOA's, MOU's, and ISSA's providing support to the FBI, State Department, and the Capitol Police just to name a few. With new requirements continuing to surface and current agreements in place, the ASP has to continually shift its storage plan to support these increasing requirements. Currently, the ASP has dedicated (4) magazines for FBI ammunition, (1) State Department magazine, (1) Aviation Ordnance magazine, (1) EOD magazine, and additional ammunition scattered throughout the ASP to support Marine Corps Systems Command, Marine Corps Warfighting Laboratory, and other Agencies Research and Developmental Testing.

We've had the luxury of serving with some of our Ammo Brethren from I&I Topeka, Kansas for extended periods of time, most of which were Marines on Active Duty Special Work (ADSW). Truly, this experience has proved to be invaluable for educating our young Marines Active and Reserve. The Marines from Quantico would like to give a special thanks to Cpl Rosenow, LCpl Lewisjones, and all the other Marines whom have served with us in the past, and future. It has truly been an honor to work with you. Stay Hard, Stay Marine, and Semper Fi.

MCB Quantico has introduced the DoD sponsored web-based Interactive Customer Evaluation (ICE) system for addressing concerns in Installation Service. The purpose was to improve internal customer service and to provide fast information flow between installation management and customers. Comments for the MCB Quantico ASP may be submitted via the web at <http://ice.disa.mil> or via email address CG4AspICE@NT.QUANTICO.USMC.MIL. The email address was established to provide the ASP OIC with accessibility to customer questions or comments to service while at the ASP.

We've got a few more large projects to go and have secured additional funding to support the installation of the Vehicle Staging Area Lightning Protection System, Perimeter Fence replacement, and jersey barriers. As we all know, our job never ends.

CWO3 Frappier is currently assigned as the Officer in Charge of the Quantico ASP and may be reached at DSN: 278-5744, e-mail: FrappierAJ@nt.quantico.usmc.mil

ASP, Camp Lejeune Marines are coming home to numerous changes, All good

Manager Course 002-03

For those Marines that have served at the Ammunition Supply Point, Camp Lejeune North Carolina, it is well known that working conditions have at times been less than idyllic. While service to the Expeditionary Forces has never been affected by the working conditions, morale and ease of mission accomplishment certainly have been. Initially meant to be temporary, trailers that house the Issues, Storage, and Records section have been utilized for nearly twenty years. Equally antiquated are the guard shacks and the access points that security personnel make use of in the performance of their daily duties. Many of the ammunition storage buildings have been badly in need of repair, replacing, or updating for many years. All of the aforementioned areas are now getting the attention they so rightly deserve. A new, better Ammunition Supply Point is taking shape that will carry Ammunition Company, and its Marines well into the new millennium.

The Ammunition Supply Point's current footprint encompasses 235 acres. Within this area are sixty-six earth covered and aboveground magazines, with a maximum net explosive weight capacity of 3 million pounds. Storage capacity within the ASP currently can only accommodate approximately 25-30 percent of the requirement to the current MARSO (Marine Ammunition Requirement Support Order). With the projects now underway, and planned projects

for FY06 and FY08 respectively, acreage will remain the same and storage capacity will increase exponentially.

Parking at the Ammunition Supply Point has continually been an issue. The quantity of parking stalls has always been inadequate, thus forcing many Marines to park across the often-busy and dangerous Sneads Ferry road. This was cause for serious concerns regarding our Marines' safety resulting in a push by senior leadership to obtain funding for painting a crosswalk and installation of reduced speed limit warning signs over the busy thoroughfare. The completion of the Operations building, slated for October of this year will pave the way for the demolition or removal of the trailers and the maintenance shed to make way for the new parking lot. The parking lot; designed to be constructed within the main compound, will be able to accommodate upwards of eighty vehicles alleviating the need for outside parking and creating safer access for Marines arriving at the ASP for duty.

Current cost estimates of improvement projects underway, exceed 5.6 million dollars. These projects include construction of five 25 by 80 foot Stradley arch fuze and detonator earth covered magazines. The construction of an Issues, Segregations, and Inspections building with adjoining 125 by 200 foot lot is near completion. Additionally, one triple arch Stradley earth covered magazine is in the process of being sited at the package crew facility adjoining the main ASP. These projects alone will increase the maximum N.E.W. in that area by one million pounds and eliminate the need for one of the last Marine Corps site exemptions in the Ammunition field.

Fiscal year 2006 will bring about the planned construction of four additional 25 by 80 foot Stradley arch earth covered magazines. These magazines will take the place of smaller magazines now on site. Those of us who remember "small arms make big arms", will be happy to know that new above ground small arms magazines will be constructed to replace the old tin sheds. These new magazines will likely be built on the same locations as the old, but location have yet to be determined. Other planned construction for FY06 includes a 200 by 300 foot vehicle staging lot with a maximum N.E.W. capacity of 30,000 lbs.

During the 2008 fiscal year, construction of six additional Stradley earth covered magazines is planned. At the completion of the FY06 through FY08 planned

construction, and in conjunction with current projects now underway, the Ammunition Supply Point will be able to store over 97.5 percent of the annual MARSO requirement. This increase improves the ASP's overall storage capacity by nearly 50 percent to its current capabilities.

The Ammunition Supply Point at Camp Lejeune has always been known for its professional, knowledgeable service to the Expeditionary Forces. With current projects underway; and planned for the future, the Marines here are finally getting a first class look to go with their first class performance.

This article has been a compilation of thoughts and ideas from the members of Ammunition Managers Course 002-03. The members were as follows: CWO2 Harman, currently the AIOC/ Operations Officer CLNC ASP, CWO2 Harben, currently the Storage Officer CLNC ASP, WO Hedinger, 1st Plt Commander Ammo Co CLNC, WO Lewis, Okinawa Japan, WO Weppner, MCSC-PM AMMO Quantico VA, WO Inns, 2d Plt Commander Ammo Co CLNC, And SSgt Morrell, Instructor Redstone Arsenal AL.

Goodbye MAARS, Hello OIS...

Mr. Banks, CWO4, USMC (Ret.)

It sometimes comes to pass that we find ourselves saying goodbye to an old friend or a family member, knowing that we might never see them again. The parting can be an occasion of sadness, or it can be the beginning of something new and exciting. So it is with the upcoming transition of the Marine Corps' ammunition asset records from the Marine Ammunition Accounting and Reporting System II (MAARS II) to the Naval Ordnance Information System-Wholesale (OIS-Wholesale). As a project, it is referred to as the M2C, or MAARS-Migration-to-CAIMS. (While the Marine Corps is not migrating to CAIMS specifically, the functionality included in the OIS-W is fundamentally what exists in CAIMS. So, in order to preserve labels that more people are familiar with, the CAIMS term was retained even though the target system for the migration is actually the OIS.)

A number of articles have appeared in recent editions of the Ammunition Quarterly (and other

periodicals), describing some element of the 21st century logistics "transformation" that is ongoing throughout the Corps. This will be another in that same vein. From "No More Meatballs, please..." (Marine Corps Gazette, Jan 2003), to "The Winds of Change..." (AQ, Vol 8, No. 4, Jan 2003), and the follow-on "Supported Unit Iterative Transformation – Ammunition" (AQ, Vol 9, No. 2, Jul 2003) some of the transformational events that will affect the Marine Corps' ammunition business have been introduced to the community at large. It is only the beginning. But, before we examine the transition of the MAARS record to OIS, some history and context is appropriate in order to appreciate the task ahead.

MAARS had its beginnings in the late 1960s when the Marine Corps developed the Marine Corps Unified Materiel Management System (MUMMS). The MAARS operated as part of the Stores Accounting System (SS-04) on a mainframe computer. It was fed and managed using the venerable but ancient 80-column punch card. The cards were fed into the machine as a batch to update the asset records. It wasn't pretty, it wasn't fast, and it certainly wasn't very efficient. But, that is what the technology of the time allowed.



MAARS II computer system

In the mid-1980s, the Ammunition Logistics System (AMMOLOGS) was introduced for the retail, or ASP, level of transaction processing. One or more dumb terminals were connected to a mainframe computer and used to create transactions until they were processed as a batch. Upgraded in the early 1990s, it became AMMOLOGS-II. This system was the first retail-level ammunition management system that could be deployed to the operating forces, in this case, Somalia. Still not pretty, but as before it was what the technology allowed at the time.

In the late 1980s, the MAARS was reaching the end of its useful life. An upgrade was needed, and so, MAARS-II was introduced in 1990. Taking advantage of newer technologies and software, the Ammunition Branch migrated from a mainframe environment to a mini-computer. This complex migration had the advantage of eliminating punched cards, and placed the computer resources with the ammunition managers, rather than in a remote location. Transactions were still processed as a batch, but now reports could be generated locally as needed and responsiveness was much improved. With the wholesale end of the business running smoothly once more, it soon became time to focus on AMMOLOGS again.

In 1994, the Marine Corps partnered with the Navy (whose ammunition management challenge is similar to ours, except on a much grander scale) to devise a unified Naval system for retail-level ammunition management. This system would vertically integrate the functionality provided by AMMOLOGS-II, and three Navy retail-level systems (OMS, FOSAMS, and SCAAIR) into a single system to be used by the Navy, and both the ground and aviation communities of the Marine Corps. The Retail Ordnance Logistics Management System (ROLMS) was fielded in 1998 and has since become the single retail-level ammunition system for the Navy, Marine Corps, and Coast Guard (and, the only significant Joint service ammunition information management success story in the DoD in over 20 years!)

This still isn't the end, however — it remains but a beginning.

With demise of the Joint Ammunition Standard System (JAMSS) it was decided rather than modernize MAARS-II that a Naval approach would be the material solution created by JAMSS termination. Developed by the inventory managers at the Naval Ammunition Logistics Center (NALC), Mechanicsburg, technical and functional engineers of the Naval Surface Warfare Center Crane Division, and specialized contractor teams at Naval Weapons Station Yorktown, and Bloomington, Indiana, the OIS has been in development for over four years. It will ultimately replace the Navy's Conventional Ammunition Integrated Management System, or CAIMS.

The OIS is a vertically integrated, web-enabled collection of formerly separate user applications, internal processes, and report generators operating against a distributed Oracle relational database.

Authenticated users will interact with the database from their desktops, using a web browser, web-enabled forms, and specialized applications. The OIS will create a transformational change for management of the ammunition inventory, and will position the Naval ammunition community to become one of the first major commodities positioned with an open system that will part of the Global Combat Support System (GCSS) Family of Systems (FoS) that are being championed by the Joint Chiefs of Staff, Unified Combatant Commanders and the Deputy Commandant for Installations & Logistics (DC I&L) top priority.

Now, I told you all that to tell you this — everything you've read up to this point was to set the stage for a discussion of the ongoing preparations for the MAARS migration to OIS. It may be time to say goodbye to MAARS, but MAARS will not go quietly into retirement.

The migration of asset records from a flat-file system such as MAARS, into a distributed Oracle relational database is often a complex undertaking. To accomplish the planning and preparation for the migration, the PM-Ammo assembled a team of Government personnel (PM-Ammo, NALC), and contractors (BAE Systems, AOT, Inc., and CACI). This team is charged with examining the MAARS record, identifying, and making recommendations regarding discrepancies in the technical data, in the NSN data, and address records. The team is also assisting in purifying the current asset records. Of course, the MAARS history, or the collection of all transactions that occurred prior to the migration also needs to be handled. By October 2003, the history itself will amount to some 3 million records, dating back to early 1995.

Under current planning schedules, the Marine Corps' ammunition asset records will be migrated into an unclassified instance of the OIS-Wholesale on or about 15 Oct 2003. In this initial phase, transactions created by the user will still be batched and processed periodically throughout the day. In subsequent releases of the Naval OIS planned during 2004, even our familiar ROLMS functionality will be vertically integrated into the complete system (along with approximately 18 other Joint/Naval applications).

Let's begin our examination with the address record. Recommend reading Mr. Tim Villa's companion article about RIC, RUC, and AAC. Activity addresses are established for every military organization that will receive mail, receive supplies, or receive billing

for various services and supplies provided elsewhere. For our ammunition community, of course, the most significant is the “Ship To” address. The “Ship To” address helps transportation officers determine where material is to be delivered. MAARS receives updates from the master address records at the Defense Automatic Addressing System Center (DAASC). What we have discovered in our analysis however is that MAARS doesn’t always process these updates well, nor does it ignore addresses it does not need. Thus, of the approximately 80,000 existing address records in the MAARS database, only a little over 300 are currently significant to us. Additionally, in a holdover “attribute” from its earlier version, MAARS address record fields are allowed 50 characters per line.

The OIS only allows for 35 characters per line, so we need to “shape” Marine Corps address records to fit the 35-character limit.

The source for technical data and NSN data records in MAARS (and ROLMS) is the Federal Logistics Information System (FLIS, or FedLog, to some folks). These data and periodic updates are provided to MAARS by the NALC. The technical data is information associated with the ammunition item itself (weight; cube; dimensional data; storage, handling, and transportation characteristics; net explosive weight values etc.). The NSN data is information related to the packaging characteristics (inner/outer pack; unit pack quantity, packaging dimensional data and characteristics; and reference drawings.) The updates received from FLIS only update items that are cataloged with FLIS.

Updates for items unique to MAARS such as selected components, and items with locally assigned NSN associated with developmental or pre-production articles are assigned local NSN. Locally assigned NSN data can only be updated locally within the MAARS database itself. Of the 1223 NSN-level records currently in MAARS, only 704 are recognized by OIS. The remaining 519 NSN must be analyzed and sufficiently documented to establish these NSN in OIS, or deactivate the NSN (if no assets exist), in order to complete the migration.

There are a number of other issues that will affect the migration planning. The MAARS uses some 445 individual data elements (or, fields) to execute the Marine Corps’ ammunition inventory management functions. Certainly, not all of them are used in all transactions. Some MAARS functions may only use half a dozen of those elements for their particular need.

But the content of each is significant to MAARS in some fashion, and must be examined for retention, conversion, or exclusion during the migration.

Once we understand the content of each of those data fields in MAARS, we also need to understand their attributes, or characteristics. Is it a numeric field, alphabetic, or mixed? How long is the field (how many characters will it hold?) Is a number value an integer (a whole number), or a decimal value, and if so, how many decimal places must it have? Some of these fields are mandatory (i.e., they must contain data, or in database terminology, are non-Null), and some are not.

The OIS however, uses some 900+ data elements, many of which are non-Null. Additionally, because the OIS is a “relational” database, each table (a set, or list, of defined data elements that have a common relationship) contains a primary key, and may contain one or more foreign keys (data elements from other tables that establish “relationships” between two or more tables.) The Marine Corps has never previously used a significant number of the data elements that are used within OIS. In order to make the migration successful, we not only need to convert or transform relevant MAARS data fields into their OIS counterpart, and fill in “holes” that MAARS would allow as empty but where OIS requires data; we also need to populate non-Null fields that were never previously used by the Corps.

The final pieces of the puzzle – two of the data elements from MAARS must be split into two pieces each. The first is the AAC, or Activity Address Code discussed earlier. We are all familiar with it as the first six characters of the document number, or it can be used as the Supplementary Address. In OIS (using the Navy’s methods), this will be split into a Service Designator (SD), and a Unit Identification Code (UIC). ROLMS users are already used to this method of parsing the AAC. Now, the item managers at PM-Ammo will need to adjust to this new business rule. The other, and perhaps more significant from a PM-Ammo perspective, is changing habits from using the familiar National Stock Number (NSN) and DoDIC, to using the National Item Identification Number (NIIN) and DoDIC for transaction creation and processing. Again, the ROLMS community is already familiar with this method, but it will be new terrain for PM-Ammo. A NIIN combined with a Federal Stock Classification (FSC) creates a unique data point – a NIIN by itself is not required to be unique. This, too, will require a

mental shift in the way the item managers process their transactions against the asset record.

So, where has all this examination led us?

The history underlying MAARS, and the technical discussion of the work to be done for the migration are intended to provide a framework for our ammunition community to appreciate the magnitude of change that is about to be put into motion. Where previous system upgrades/changes were also technically complex, the technologies did not then exist to enable the ammunition community to create fundamental shifts in how we think about the ammunition business and our processes.

When the work of the M2C project group has been completed and the migration is executed, PM-Ammo will have taken a giant leap into the 21st century. The vast majority of the item managers' work will have moved from an environment using terminal emulation to access MAARS records, to the OIS-W web-enabled platform. They will no longer be dependent on the server being in the same building, or even the same base (under current planning, the separation will be something like 150 miles). Additionally, the OIS-W will provide the first set of Service Headquarters-level tools for bringing the ammunition community into the new age, and will complement the initiatives supporting the Integrated Logistics Capability (ILC). Beneficially, PM-Ammo will be positioned to adopt the full OIS when deployed less than two years later, completing the bridge to the GCSS FoS, and the Marine Corps will be able to provide global near real-time visibility of its wholesale and retail ammunition assets in support of the Combatant Commanders, as mandated by the CINC-129 Warfighter Requirements.

As a final historical point, if you still remember OD-12067L, OD-16135, and the OD-17190, you probably read this article with bifocals — the same way it was written. Those documents are gone now, but not forgotten. Soon, MAARS will follow them into history.

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

[Editor's Note: The Marine Corps component of the team assembled to shepherd this project brings well over a century and a half of experience to the table. It includes Dennis Zarnesky (PM-AMMO IMSD Division Head), 'KJ' Kjeldahl CWO5 Ret., Steve Banks CWO Ret, and Tim Villa MSgt Ret, with over a century of USMC ammunition service and extensive systems

experience. Joe Shean of BAE Systems, the MAARS doctor, has over 26 years of IBM & AS/400 experience. Bill Steinhardt also brings programming, education, and technical writing experience as a previous Journalist to the team as well. In addition PM-AMMO has assigned additional support and resources from the IMSD Teams of Karen Ross as the Inventory Management Team Lead, Charles Black as the Inventory Accuracy Team Lead, and Steve Burrill as the Systems Team Lead.]



A Brief Discussion on DoDAAC, UIC, RIC, and RUC

Mr. Villa, MSgt, USMC (Ret.)

Acronyms are strange critters. But, in our modern military, they are absolutely essential to make communications easier for all of us. The four acronyms to be discussed are used commonly by the operators, and by logisticians.

But, WHAT are they, really? We'll break these acronyms down over the next few paragraphs. Let's start with the DoDAAC.

Department of Defense Activity Address Code (DoDAAC)

The use of the Department of Defense Activity Address Code (DoDAAC) is directed by DoD Manual 4000.25-6-M. This manual prescribes uniform methods, codes, formats, and standards for the establishment, maintenance, publication, and dissemination of required address data to the Military Services, Federal Agencies, and Civil Agencies. The Defense Automatic

Addressing System Center (DAASC) serves as the Central Control Point (CCP) responsible for maintaining the official master Department of Defense Activity Address Directory, or DoDAAD. Required updates to the DoDAAD are forwarded to DAASC from designated Service/Agency Department of Defense Activity Address Code (DoDAAC) Service Point (SP) activities. These updates include additions, changes, and deletions to the mailing, shipping, and billing addresses of the identified DoDAAC.

The DoDAAC is one of the codes used in support of the Defense Transportation Payment Program. It is a six-position code that uniquely identifies a unit, activity, or organization that has the authority to requisition and/or receive materiel. MILSTRIP orders are only shipped to a DoDAAC-associated address. There can be up to three distinct types of address associated with each DoDAAC, as follows:

TAC1 – identifies the mailing address for the activity (mandatory).

TAC2 – identifies the ‘ship to’ (freight) address for the activity.

TAC3 – identifies the billing address (the activity responsible for the payment of bills).

The first position of the DoDAAC designates the particular Service/Agency element of ownership, example:

- * M=Marine Corps
- * N=Navy
- * A= Air Force and
- * W= Army

The second thru fifth position of the DoDAAC introduces our second acronym, the UIC, or Unit Identification Code. Take, for example, DoDAAC MMLQ50.

In this DoDAAC example, the first position of MMLQ50 is M, representing a Marine Corps activity. The next 5 positions, or UIC, represent the specific Marine Corps unit that the DoDAAC is assigned to. In this case, it represents:
 COMMANDING OFFICER,
 2D SUPPLY BN (ASP), PSC BOX 20128, CAMP
 LEJEUNE NC 28542-0128

Unit Identification Code (UIC) The Unit Identification Code, or UIC, identifies a ship, shore activity, operational unit, agency, contractor or other operational entity in the manner specified by individual military service/agencies for financial or other purposes. This is a unique code assigned to each USMC unit used to identify a specific unit and, as we learned above, is a component part of the AAC. Current Marine Corps policy is that all UIC, when combined with the Service Designator (the ‘M’ in our example) will be identical to the AAC, and listed in DAAS.

For those of who have, or are, serving with the Navy, or are CAIMS or ROLMS users, the UIC is not a foreign term to you. The Navy uses the UIC instead of the AAC in their management systems for ammunition accounting.

Routing Identifier Codes (RIC). The Routing Identifier (RI) Code is assigned by Services/ Agencies for processing inter-Service/Agency, and intra-Service/Agency logistic al transactions. The RI code performs in multiple roles, and can be used as a Source of Supply code, an intersystem routing code, intra-system routing code, and as a consignor (shipper) code. A specific, unique RI code is assigned to inventory control points, inventory manager’s distribution points, and designated storage points.

The Routing Identifier Code (RIC) is a three position alphanumeric code. RIC identify the activity originating the supply document, the recipient of the supply document, and/or the shipper. Numeric codes in the first position are not recognized within MILSTRIP. RIC that are comprised of all numerals are reserved by DoD and are not to be used or considered as RIC.

First Position. All authorized RIC will contain one of the alphabetic characters in the first position, depicting service assignment, as follows:

A, B, C, W	Dept of the Army
D, E, F	Dept of the Air Force
N, P, Q, R	Dept of the Navy
M	Marine Corps
G, V	GSA, other Civil Agencies
S, T	Single Manager Agencies
H	Other DoD Activities
Z	Coast Guard

When the second position of the RIC is alphabetic, the first and second positions together identify the service and the facility. In these instances, the third position may either identify a specific internal address or storage component within such facility, or may be insignificant. In example:

BB2	W53XMD	Crane Army Ammunition Activity
MLQ	MMLQ50	Ammunition Branch DSSC Marine Corps Base Camp Lejeune

When the second position is numeric, the second and third positions identify the physical facility of the service depicted by the first position. Assignment in this manner does not provide for internal addresses or specific activities within such facilities.

Two such examples follow:

P72	N00109	NAVAL WEAPONS STATION NAVY MATERIEL SUPPLY DEPT YORKTOWN VA
M69	MM6950	US MARINE CORPS LIAISON CODE 20C3 NAVAL WEAPONS STATION CHARLESTON SC

Reporting Unit Code (RUC) Intentionally, the Reporting Unit Code) was saved to be the last item. Why? The answer is that the RUC is not used for logistics, while the other three are. It is also a Marine Corps-unique term. The RUC is five (5) characters long, and is only used for manpower matters (i.e., personnel, pay and allowances, leave, etc.).

It is important to note that a Marine Corps RUC, a term that most of us are familiar with, is not the same as a UIC. And the last five characters of the UIC are not the same as the RUC. They are not interchangeable. As an example, RUC-30002 represents Marine Corps Systems Command, Quantico VA. However, UIC-M30002 is assigned to the Director, Command and Control Systems School, clearly, a different organization.

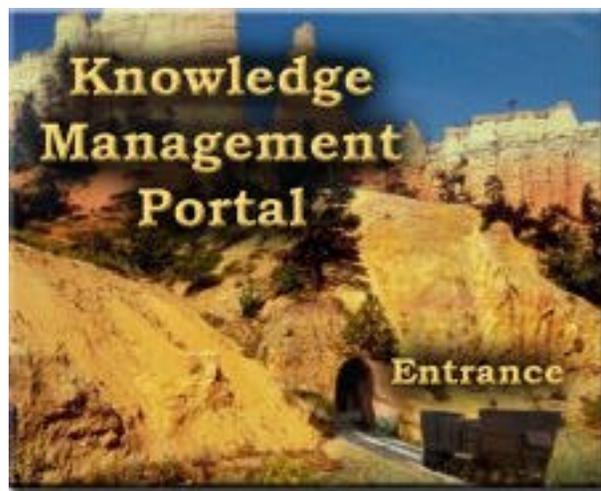
Hopefully, this brief introduction to some common acronyms we encounter every day will help you to understand your ammunition business just a little

bit better. If you're curious, and want to see how your unit is identified in the DoDAAD, visit URL <https://day2k1.daas.dla.mil/dodaac/dodaac.asp>. There, you'll be able to look up your unit in a variety of ways, by the AAC, by the RIC, or by your mailing Zip code. Do some exploring, and learn more about how your logistics systems perform their magic.

Mr. Villa, MSgt, USMC (Ret.)

Ammunition Knowledge Management Portal

Mr. Burrill, MCSC -PM AMMO-SYS Team Lead



Many exciting changes are happening on the Knowledge Management Portal (KMP). KMP is the central knowledge repository for supply Class V (W) data with a goal of providing consistent and comprehensive information. The information has great diversity and not all information is required by all so we have tailored the KMP to meet this need through multiple access levels. Access levels to information are tiered based on the need to know and requirements set forth in our Authority to Operate (ATO) plan. If you feel you have a need please contact us and we will review your request.

Here are some of the recent additions to the KMP:

- * History Lot Level:
- * History Lot Level is a compilation of all armed services Class V (W) ground ammunition assessments. It is updated daily and includes, but is not limited to: a lot-level historical information (since 1970) from NAR's (Army and Navy/Marine Corps), Overhead Fire

Supplements, Missile Supplemental Notices, Initial Malfunction Reports, Malfunction Investigation Files, and Deficiency Investigations. It also includes test results from ammunition evaluations, including but not limited to: Army and Marine Corps Ammunition Surveillance, Lot Acceptance Test, First Article Test, Initial Production Test, and Special Investigations.

* World Wide Inventory:

* World Wide Inventory is a compilation of all armed services Class V (W) ground ammunition inventories contained within the Marine Ammunition Accounting and Reporting System, U.S. Army Worldwide Ammunition Reporting System, and Navy's Conventional Ammunition Information Management System. It is updated monthly and contains the ownership, DODIC, ALN, serial number (if applicable), quantity, condition code, storage site, defect codes, nomenclature, and remarks related to NAR activity or recent stockpile recommendations by PM AMMO's surveillance activities. It also contains corrected DODIC, ALN, serial number, and condition code if applicable.

In addition to new information being made available on a regular basis, the Systems Team is committed to providing a faster response and an easy to use interface. We welcome your feedback whether good or bad so we make a better product for you! If you do not have an account we encourage you today to apply on line by going our Public Web Site and click on the Request Access to KMP link.

<http://www.marcorsyscom.usmc.mil/am/ammunition>

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



Reserves Conquer Norway

CWO3 Fulton, Inspector Instructor, Rome, GA

Our SMCR Marines embarked on a fact finding and developmental exercise, Norway Air Landed Marine Expeditionary Brigade (NALMEB) 2-03, during one of the many Annual Training Exercises that were schedule for FY'03 on 17, May 2003. These Marines set aside their normal civilian jobs and college academics each year to develop and hone their skills as Ammunition Technicians. This year a group of 15 Marines from Ammunition Company, 4th Supply Battalion, 4th FSSG, Greenville, SC deployed to Trondhiem, Norway to begin loading the new and recently DOD approved Steel Transport Frames (STF's).



Loaded STF

The STF's were developed to reduce the amount of dunnage that is used in packing the standard 8'X 8'X 20' shipping containers and minimize the contamination of the Pinewood nematode. The reduced dunnage results in a significant savings in and of itself, but it doesn't stop there. The largest savings is in the man-hours spent loading, packing, unpacking and unloading of the containers. Currently, it takes approximately \$2,000.00 of dunnage and 36 man-hours just to load a standard container for shipment. By their efforts, the cost savings of dunnage and man-hours on the loading end is \$2,000.00 and 31 man-hours for a total per container savings of over \$20,000.00. On the receiving end it currently takes about 20 man-hours to unpack and unload the containers and oh by the way,

how do the Marines on the receiving end quickly and efficiently remove and dispose of all that extra dunnage? Currently the excess dunnage is used for quality of life improvements in and around their field ASP's (i.e. tables, chairs, bunker support, etc.) or it is burned in theater.



Marines configuring an STF

Led by MSgt Timothy Walkden, this group of Marines set out to begin the repacking of ammunition into these new STF's. Unlike normal transportation drawings supplied by the Defense Ammunition Center (DAC) for the optimal packing of ammunition, these Marines had to not only pack the ammunition into the STF's, but had to develop the drawings and configurations from scratch. At first it seemed to be just the run of the mill repack operation, but they soon learned through trial and error that it wasn't so simple. They spent several hours of intense manual labor packing, unpacking and re-packing the STF's into the best configuration possible.

During their 18-day exercise, these Marines far surpassed the expectations and goals of the Norwegian NALMEB managers. These Marines were divided into two different groups to expedite the scheduled workload. By dividing into two groups, one group at the Kalvaa Cave Site and the other at the Hammernessoden Cave Site, they were able to significantly increase their productivity. At the Kalvaa site, led by Cpl David Kemp, they packed 51 STF's, over 78,000 rounds, and in excess of 192,000 pounds (87.5 tons) of ammunition. The Hammernessodden site, led by MSgt Timothy Walkden, packed 18 STF's, 4 half-high shipping containers, over 39,000 rounds, and in excess of 142,000 (64.9 tons) of ammunition. The



STF Ammo operations

total production of these Marines resulted in the repack of 69 STF's or the equivalent of 14 8'X 8'X 20' shipping containers and 4 additional half-high shipping containers of 155mm projectiles, over 117,000 rounds and in excess of 335,000 pounds (152.4 tons). What makes this even more significant is the fact that during their time there, it was all done during a reduced work schedule because of a Norwegian national holiday. Even with all this work, they found time to enjoy the sites and local customs.

These Marines through their actions solidified the term "One team, One Fight." They are ready and more than capable of performing their tasks as Ammunition Technicians with the best of them.

CWO3 Fulton is currently assigned to I&I Rome, GA and may be reached at e-mail:
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GREETINGS, SALUTATIONS AND WHERE DO DODICS AND NSN'S COME FROM?

**Mr. Robert R. Payne, Manager, ASG, Code 4033,
NSWC, Crane Indiana**

If you have been paying attention to the past three editions of the Program Manager's Ammunition Quarterly, you will have seen my name associated with

an article in each of them. As a reminder, I wrote articles on the new Line Charge Fuze, the new configuration of the CS Capsule and the last was on how the Acquisition Support Group of the Marine Corps Ammunition Branch supports the Program Manager. Hope you have been paying attention. If not, "GET DOWN AND GIVE ME TWENTY"!!!!!!!

The Managing Editor of the Ammunition Quarterly recently contacted me and asked if I would be willing to contribute an article to this publication on a regular basis, kinda like a Contributing Writer. I thought, "What the heck", I've been a member of the Marine Corps' ammunition community as an active duty 2311 and "Civilian Marine" for over twenty seven years now, maybe I have something to share that would be both informative and entertaining. So, I guess you are stuck with me for a while.

Ask any Ammunition Officer or Technician what an A059 is and they will know immediately. Ask them what a G881 or a M023 is, and they will know that too. Ask them what the FSC for small arms ammunition is and more than likely they will tell you it is 1305. It is amazing how quickly we in the Marine Corps Ammunition Community remember DODIC's and FSC's, Now ask most what the Model Number of those same items are and most of us will not have a clue. Ever wonder where DODIC's and NSN's come from? Well, you are about to find out.

Several years ago, the Program Manager For Ammunition assigned the Marine Corps Ammunition Branch, Code 4033 located at Crane Indiana, the responsibility of initiating all Cataloging Actions for the Marine Corps when it came to Ammunition Items or Ammunition Components. Code 4033 has a dedicated individual that is responsible for that role. When he is contacted by PMAM to Catalog a new item in order to get it assigned a Department of Defense Identification Code (DODIC) and or a new National Stock Number (NSN), he fills out a Cataloging Action Request (CAR) Form. The CAR contains approximately 47 data elements of technical data. Such as weight; length; net explosive weight, and so on. Along with the CAR, he has to assemble a complete package that contains among other things, drawings, test data and so on. This package is submitted to the Navy Ammunition Logistics Command (NALC) located at Mechanicsburg Pennsylvania. They have a person that is dedicated to support the Marine Corps Cataloging requirements. This person at the NALC inputs the data provided by Code 4033 into the Federal Logistics Information

System (FLIS), via a portal named LOLA. FLIS is maintained by an organization located in Battle Creek Michigan by the name The Defense Logistics Information Service (DLIS). FLIS contains thousands upon thousands of NSN's. It contains NSN's for everything from tanks to tissue paper to medicine to tents and yes, to ammunition. When the data is received by DLIS that is provided by the NALC it is placed in limbo. A cataloger assigned to DLIS gets a notification that he/she has received a CAR. They review the data for accuracy and once approved it is released into FLIS. Based on the data provided, FLIS will automatically assign the DODIC and or NSN. In other words, the DODIC and NSN is really not assigned by a human, it is done by a computer based on information provided by a human. For those that don't know, FLIS is the only and I repeat only, official repository for ammunition technical data. Now the services can develop their own systems that contain this technical data in a way that it meets their specific needs, but the services make every effort to ensure that the data matches that located in FLIS. Eventually, the newly assigned DODIC and NSN with all of it's associated data trickles down to the respective services Wholesale and Retail systems so everyone in need has access to it.

This process takes some effort to plan out. Once a requirement is identified for a new item, the idea is to initiate the process early enough so that the DODIC, NSN and all of the required technical data is identified early enough so it can be provide to the manufacturer. This ensures that all of the appropriate data is available for the proper markings of the inner and outer pack at time of Load, Assembly and Pack (LAP).

There you have it. I assure you, I shared the "Reader's Digest" abridged version and did not come close to share all of the details as to what one goes through to get an item cataloged. Believe it or not, it can take several years before the process is complete.

A couple of more thoughts before I go. I am a giver, but I also like to be a receiver. If there is something you want to share with me, or a topic you would like for me to cover, don't hesitate to contact me.

Finally, I truly believe that "Knowledge" is good. So, at the end of all of my articles, I will leave you with a "Factoid" titled. "Did Ya Know"? So here is your first Did Ya Know? "In 1866, a First Sergeant made \$24.00 per month, all other Sergeants made \$20.00, Corporals made \$18.00, musicians and Privates made \$16.00 a month. Extra pay for Sea Duty was

\$1.50 per month. In addition, each Marine received one ration per day and an abundant supply of clothing. Quarters, fuel and medical care were free.”

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

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 001-04 @ CLNC Report Date 6 Oct 03, Grad Date 5 Nov 03. 25 school seats available for this class. The NCO MTT course includes the Naval Motor Vehicle and Railcar Inspection Course (Ammo 51).

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).

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**

AMMUNITION LOGISTICS FOCUS TEAM – UPDATE

CWO5 Patterson, Redstone Arsenal

In the January 2003 edition of Ammunition Quarterly, we introduced the formation of the Ammunition Logistics Focus Team (ALFT). The purpose of the ALFT is to serve as the ground ammunition logistics chain transformation team using the logistics operational architecture (OA) as the functional roadmap. The team will examine doctrine, policy, procedures, and techniques, in combination with emergent technologies, and devise, recommend, and/or promote changes through experimentation and analysis. The ALFT is composed of members from MARFORPAC, the operating forces, the Marine Ammunition MOS producing Schoolhouse, and PM-Ammo, with support as required from the MEC, MCWL, Training & Education Command (TECOM), PM GCSS-MC, DCMC I&L, and others as required for accomplishing the tasks at hand. The ALFT will concentrate its efforts around five pillars, or core principles: Doctrine and Policy; Tactics, Techniques, and Procedures (TTP); Information Technology (IT) enablers; Communications; and, Education.

I am pleased to report the ALFT has been extremely busy this summer with two Supported Unit Iterative Transformation –Ammunition (SUIT-A) (see July AQ for additional information) initiatives that will be referred to as Iterative Transformation Initiatives (ITI):

- * Supported Unit Ammunition Module (SUAM)
- * Training Ammunition Management Information System – Redesigned (TAMIS-R)- Implementation

To facilitate these efforts the AFLT core team met 29-30 July in Chantilly VA and began developing a business process model for the Supported Unit Ammunition Module (SUAM). This effort consists of defining the business processes that lead to development of the TTP/technology solution. The SUAM will provide the Supported Unit with the capability to electronically capture ammunition issue data for real time update, reporting and command visibility of on

hand assets. The challenge here is to facilitate the exchange of required data in near real time between existing IT management and accounting systems in order to reflect the transfer of custody of ammunition as it occurs and make that transaction visible to all required command levels. When the process model has been confirmed, the next step in this effort is to develop a test plan to validate the model at the Quantico ASP in early FY04.

The team also developed an aggressive implementation plan for TAMIS-R as the standard Marine Corps-wide forecasting and training allowance management tool. The TAMIS-R is an unclassified, non-sensitive, centralized automated data processing system used to collect and process training ammunition authorizations, forecasting, expenditures, and reports.

In a collaborative effort with the T&E Command's Ammunition Office, the initial hierarchy for granting user rights was established and populated with known FY04 Training allowances. TAMIS-R Training dates were established and commenced for 22 students from all major commands 18 Aug 03 at the Marine Element, Redstone Arsenal, AL. Mr. Wayne Johns and Mr. Holtzclaw developed the training package and conducted the course. Redstone will host another iteration of the training 8-12 Sept., with technical support visits scheduled for September in Okinawa and Camp Lejeune.

The TAMIS-R training package is available for download in a PowerPoint Presentation format on both the PM AMMO's website and the Marine Element, Redstone website.

The ALFT will meet again in the first quarter of FY 04 to finalize the initial SUAM Version 1.0 Test Plan to be conducted at the Quantico ASP. Once a baseline process has been described and developed, the team will solicit ammunition SME to participate in the validation and verification of developed solutions and TTPs. The initial SUAM effort is intended to leverage Unit Level Ammunition Status (ULAS) type technology in order to satisfy SUAM release 1.0 capabilities as outlined in the SUIT (A) POA&M, available for review on the PM AMMO website. Subsequent to this test and evaluation of the results, the next phase of SUAM (version 1.5) will attempt to establish a method for automating and simplifying the malfunction reporting process, as well as work to incorporate functionality and data exchange from TAMIS-R. This series of tests will

identify deficiencies and develop additional capabilities as the SUAM methodology matures.

I look forward to reporting to our Marine Corps ammunition community from time to time on the progress of the ALFT. Stay tuned to the pages of the Ammunition Quarterly. The winds of change continue to blow.

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

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Training Ammunition Management Information System Redesigned (TAMIS-R)

- **Iterative Transformation Initiative (ITI) Forecasting was announced by MARCORSSYSCOM message 071930Z Aug 03**
- **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**
- **Army facilities will not issue ammunition without a proper forecast in TAMIS-R**
- **There is currently a two-month lockout period in TAMIS-R (The last day of the month in the second row is the last day ammunition can be forecasted for the month in the first row):**

To request a logon and password, send an Email to Mr. Wayne Johns at JohnsTW@mcsc.usmc.mil with First Name, Last Name, Unit and phone number.

TAMIS-R websites:

Training site: <http://www.tamis.org/>

Live site: <http://live.tamis.org>

Month ammunition required	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Month forecast must be entered in TAMIS-R	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May