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AMMUNITION SUPPLYING IN ALLIED JOINT OPERATIONS

Abstract: *I have tried to conduct my research work to deepen my knowledge about Logistics in Allied Operations. My work is about how ammunition supplying is being done when we talk about Multinational Support in Allied Operations. In the introduction a new strategy of Allied Joint Operations was explained. The first chapter shows how the changes of the new strategy affected all the military structures responsible with the ammunition supply and also the role of each structure in the whole process. Ammunition supply points, where presented in details because they have the most important role. The second chapter contains the main procedures that are being done in order to provide ammunition from the strategic level to the lowest tactical levels. The operational level confronts the biggest challenges and I used a real example to explain that.*

Key words: *military logistics, allied operations, supply and resupply chain*

INTRODUCTION

Good logistics supply means appropriate equipment arrives at the required place in due time (gen. George S. PATTON, 1944.07.17). Nowadays, the world confronts a new security environment, which is continuously changing fast and the armies need to face new challenges every day. Logistic support has a crucial role for the success of the military operations. Logistic support during multinational operations differs from unilateral joint operations in that the participating nations represent different national and military objectives, cultures, and approaches to logistic support. Army transformation strategy addresses the imperative to change the Army from a Cold War-oriented design to one, that is more responsive, agile, and adaptable to present and emerging threats across the spectrum of operations. Transforming logistics and support for the force is an essential part of the transformation effort. The Army's transformation to a modular force has changed the munitions sustainment SOP and structures significantly[2].

1. AMMUNITION SUSTAINMENT STRUCTURES

At the tactical level, munitions capabilities have moved one echelon forward. The functions of the division ammunition office (DAO) now reside in the brigade ammunition office (BAO) of the brigade support battalion (BSB) support operations office (SPO). A larger ammunition transfer and holding point (ATHP) now provides ammunition resupply during major combat operations, and the ATHP now has the capability to perform automated inventory management during stability and reconstruction operations, through the use of the Standard Army Ammunition System-Ammunition Supply Point (SAAS–ASP) software in conjunction with the SAAS–ATHP hardware.

At the operational level, changes under the modular force include the elimination of the division support command, corps support group, and corps support command and the transformation of the theatre support command. The functions formerly performed by

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[2] *Army Logistician, November-December 2007 , art. Munition Sustainment in Modular Force by Chief Warrant Officer(W-4) Dave Barron, USA (Ret.) and Lieutenant Colonel Keith A. Beverley, USA (Ret.).*

these organizations are now performed by the theatre sustainment command (TSC), its forward command post—called the expeditionary sustainment command (ESC)[3].

1.1. From division to brigade ammunition office

The DAO performed munitions management functions for the tactical level in the AOE force. This management function has moved forward one echelon in modular force transformation. The functions of managing brigade ammunition requirements now are performed at the BAO. They include maintaining ammunition requirements and visibility and distributing ammunition within the brigade combat team (BCT). The supported battalion's S–4 is still the main logistics planner.

The new, robust BSB is a combat multiplier for the brigade commander, who now owns his own support. It is a more robust organization than the forward support battalion it replaced; it has base companies and forward support companies to support all of the brigade combined arms battalions.

One difference between the original Stryker brigade design and the current modular force design is the addition of an ordnance captain to the BSB BAO. This force structure realignment allows for the placement of the ammunition warrant officer in the ATHP. Management functions for the BAO include maintaining ammunition requirements and visibility and distribution within the BCT. The BAO is responsible for distributing ammunition, verifying unit requirements, and tracking ammunition coming into the Brigade Combat Team.

1.2. Ammunition supply point

An ammunition dump, ammunition depot, bomb dump, ammunition supply point (ASP) or ammo dump, is a military storage facility for live ammunition and explosives[4]. The storage of live ammunition and explosives is inherently hazardous. There is the potential for accidents in unloading, packing and transfer; the threat of theft, misuse or sabotage; and, if neglected, the near-certainty that poorly stored explosives will degrade and become shock-sensitive over time.

A typical ammo dump will have several of the following elements: *A buffer zone* or cleared area of at least several hundred feet (sometimes as much as 1–2 km or 1 mile) surrounding the facility, in the event of an explosion; *Perimeter security*, such as a fence, to avoid casual access by unauthorized persons; *Guards* equipped and in numbers relative to the potential threat from enemy forces; *Bunkers* (sometimes referred to as *igloos*) (Magazines) where ammunition is stored under lock and key; *Blast barriers* (Traverses), such as an earth berm or buried pit, to divert the force of the blast (typically upward, but sometimes to the side) in case the ammunition detonates; *Safety Distances* are calculated between storage sites (magazines) and outside infrastructure to limit damage and set maximum holdings of net explosive content per site; A *loading area* (Transit Building or Area) for transferring stored ammunition to and from trucks, ships , railway wagons, etc.; A *flooding system* in large facilities to put out a fire or prevent an explosion in a magazine; An *Ammunition Repair Facility* or workshop will be found in many ammunition facilities. This facility is used for the repair, breakdown, inspection, and manufacture of ammunition held within or brought to the Depot; A *Destruction Area* (Demolition Range) used for the disposal by burning or detonation of defective, surplus, or obsolete ammunition or explosives.

[3] *Army Logistician*, November-December 2007 , art. *Munition Sustainment in Modular Force by Chief Warrant Officer(W-4)* Dave Barron, USA (Ret.) and Lieutenant Colonel Keith A. Beverley, USA (Ret.).
[4] http://www.thefreedictionary.com/ammunition+supply+point.

Ammunition dump as a term is more commonly ascribed to sites that store munitions "in the field" for imminent or immediate use. These are often targets for enemy artillery attack or air attack. Ammunition dumping in the field where a live operation is taking place is very dangerous and hazardous. Keeping in view the latest scenario of warfare which is known as LIC(low intensity conflict) environment, new policies for dumping of ammunition in forward areas are required to be formulized.

At the beginnings, an ammunition transfer point (ATP) was resourced in each divisional forward support battalion, separate brigade, and armoured cavalry regiment. NATO Doctrine stated that an ATP was an event, not a location. Its mission was to transfer munitions from corps-level transportation assets to the vehicles of using unit support platoons without storing the munitions or allowing the munitions to touch the ground. The ATP was manned with non-commissioned officers (NCOs) and Soldiers.

The new modular force ATHP is approximately twice the size of its equivalent ATP. It is documented with NCO's, ammunition warrant officer; during the next TOE revision, a stock control and accounting specialist will be added. The ATHP also is documented with CAISI and radio frequency identification suites to connect the logistician and populate the in transit visibility common operating picture.

The main differences between an ASP and an ATHP are doctrinal employment, capabilities, and capacity. The notional ASP is operated by 1 or more ammunition platoons, while an ATHP is a 12-man section with very limited capabilities and capacity. During major combat operations, the ATHP needs to focus on throughput operations and rapidly transfer munitions to the using unit. During stability and reconstruction operations, the ATHP provides the brigade commander with the capability to centralize munitions combat load inventories not needed for immediate combat operations. The ATHP now can report those stocks back to operational-level managers and national-level visibility[5].

An example of ASP is Ammunition Supply Point (ASP) facility for the existing Bagram Airfield in Afghanistan. The new facility replaced the existing Ammunition and Supply Point during its installation while remaining in operation during construction.

Nowadays in Afghanistan there are used ASPs that could securely contain large amounts of ordnance ranging from air-dropped weapons to trip flares. The advantages of these new ASPs result from the idea of using geotextile cells instead of classic earthen berm and here are some of the most important: eliminate the huge footprint a standard earthen berm would require; reduce the logistical burden presented by a construction of this size; develop a "metal-free" solution to reduce the danger of secondary fragmentation from the explosions.

Terram Ltd. provided a design that fulfilled all the requirements and, within four weeks of being contracted, manufactured the geotextile cells required to construct the berms for two ASPs and delivered 20 kilometres of geotextile cells. The reduction in the logistical requirement over alternate systems was a huge benefit when supplies had to travel thousands of miles, including passage through the Khyber Pass. And for Soldiers and commanders alike, the reduction of even one vehicle in a convoy is a real morale booster.

During the project, more than 16 kilometres of geotextile cells were laid until the required height was achieved. Approximately 20,000 cubic meters of sand were used to fill the cells, which were then compacted using plate compactors and heavy rollers. As the berms gained height, a crane lifted rollers atop the cells to allow compaction of the upper

[5] *Ammunition Management Policy For U.S. Forces Operating in Afghanistan ,Standing Operating Procedure (SOP)* ,15 September 2011.

layers, adding to the stability and longevity of the design. A patented stacking system allows strong vertical walls to be constructed. This means that standard blast walls and compartments can be constructed, providing a realistic alternative to existing systems for the first time. This innovative product is emerging as a new generation in force protection systems that can provide additional capabilities or complement existing systems.

Comprehensive blast tests showed superior protection and revealed the design's ability to sustain damage to the outer cells while still retaining structural integrity overall. A key benefit of the DefenCell system is that it is very lightweight, non-metallic, and compact. The individual units can be easily cut to shape and size and could be split down and readily man-packed. The system is packed on standard North Atlantic Treaty Organization (NATO) pallets and is readily air-droppable. The geotextile polymer has an ultraviolet (UV)-resistant additive, and barriers can be painted to suit local conditions or can be specially treated to meet specific requirements[6].

2. SOP AMMUNITION SUPPLYNG IN AFGHANISTAN-FROM STRATEGIC TO TACTICAL LEVEL

The standing operating procedure (SOP) and policy supersedes all previous ammunition policies in the Combined Joint Operational Area – Afghanistan (CJOA-A). The SOP document details requirements, responsibilities, and policy for Ammunition (Class V) operations and is based on CJOA-A Mission, Enemy, Terrain and Weather, Troops and Support Available, Time Available, Civil Considerations (METT-TC)[7].

Nations are generally reluctant in the early planning process to commit forces to the MNF. This is especially true regarding logistic contributions to MNF support. Logistic planning for multinational operations, therefore, can be a lengthy iterative process during which nations come to agreement on the logistic C2 organization and support arrangements only after extensive deliberation.

Sustainment is the provision of logistics and personnel services required to maintain and prolong operations until successful mission accomplishment. Sustainment is conducted for the duration of the joint mission. Specifically, supply demand planning involves the MNF operation planners, maintenance operations, and the distribution system to fully consider major components of the logistics pipeline[8].

Nations have the ultimate responsibility for ensuring the provision of sufficient supplies and services to adequately sustain their forces in multinational operations. However, under the premise that nations and MNFCs share a collective responsibility for the logistics in support of multinational operations, the MNFC will have the control of the use of commonly funded supplies and services. MNL spans all levels of war. It is, however, at the tactical level where the principal outcome sustained logistic readiness of MNL is best measured.

2.1. Strategic level

At the strategic level, MNL is characterized by the vast capacity of the Nation's industrial base, both government and commercial. The Nation's ability to project and sustain military power comes from the strategic level; it enables sustained military operations over time and represents one of our Nation's greatest strengths[9]. At this level, modern, clearly defined, well-understood and outcome-focused processes should drive

[6] http://www.contrack.com/?p=2351 (05.05.2012).
[7] *Ammunition Management Policy For U.S*…, op. cit.
[8] JP4-08 Logistics in Support of Multinational Operations USFOR-A.

effectiveness across the Department of Defense (DOD), multinational, interagency, and commercial organizations. These processes combined with agile force positioning are fundamental to optimizing MNL and are critical to the Nation's ability to maintain flexibility in the face of constantly changing threats.

2.2. Operational level keypoint for ammunition supply in Afghanistan (M. Kogălniceanu Romanian Military Base)

At the operational level, MNL has its most significant impact. It is at the operational level that strategic and tactical capabilities, processes, and requirements intersect, and it is here where the essence of MNL resides. Multinational logisticians at this level integrate or coordinate national, DOD, combatant command, Service and functional components, multinational partners, interagency, and HNS, with the MNFC's tactical requirements[10].

Multinational support agreements and arrangements can usually be considered for the provision of food, water (bulk and bottled), bulk fuel, some ammunition types and medical supplies. An example of this kind of operational level agreement is between Romania and U.S.A at "Mihail Kogalniceanu Military Base". American soldiers had a problem with the purchase of weapons and ammunition in Afghanistan and transit through Pakistan. It was risky because of Taliban attacks. The positioning of this American base in Romania is efficient because benefits of land, sea and air roots of transportation. Thus, starting missions in Romania eliminated some risks. Also, another advantage is that Romania, a NATO member, would allow the transport of equipment both ways: from NATO to Afghanistan and opposite way. Now in Romania there are more than 70 American pilots and they carried already thousands of tones of equipment, weapons and ammunition to Afghanistan.

Logisticians face their greatest challenge at the operational level because of the difficulty of coordinating and integrating capabilities from many providers.

2.3. Tactical level

At the tactical level, logistic support is nation and Service-orientated executed. Organizations operating at the tactical level are focused on executing assigned tasks to achieve military objectives. Tactical units require sustained logistic readiness to meet assigned objectives. Sustained logistic readiness results from the cumulative efforts of national or Service, agency, and other providers across the entire joint logistics environment. Each logistics echelon with a munitions branch is resourced with munitions personnel. NATO has established a new military occupational specialty (MOS) for ammunition stock control and accounting specialists (MOS 89A)[11].

There are two basic methods of operating the ammunition supply system:

1. "Push"-System - **t**he logistic organization operates a "push"-system when the replenishment is based on anticipated requirements or standard consumption rates.
2. "Pull"-System - the logistic organization operates a "pull"-system when the resupply is based on requisitions from the supported unit.

Under both of these methods, ammunition may be distributed by supply point, unit distribution, or a combination of both. Supply point distribution moves supplies to a central distribution point where receiving units arrange their own delivery. Unit

[10] *JP4-08 Logistics in Support of Multinational Operations USFOR-A.*
[11] *Army Logistician, November-December…, op. cit.*

distribution describes a delivery system, which moves ammunition supplies forward to the user unit, eliminating the individual unit delivery arrangement requirement.

In practice, an amalgamation of all existing methods will be used to support a combined/multinational operation and will vary for each campaign and phase of Operation.

Here is an example of a real situation from The battle for Combat Outpost, or COP, Keating, (Oct. 3, 2009, Afghanistan) when was a desperate need of ammo:" In the meantime, Romesha had insurgents to kick out of Keating, an ammo supply point, known as an ASP, to secure and a gate to close. He grabbed a Dragunov rifle from a wounded Afghan National Army soldier -- his own M-4 was running low on ammunition"

"He was pinned down almost immediately, as were Sgt. Justin Gallegos, Sgt. Vernon Martin, Spc. Stephan Mace and Spc. Ty Carter, who arrived at LRAS-2 to either assist or to bring more ammo, something the men needed desperately -- Larson alone went through approximately 1,200 rounds in 10 minutes.—" [12].

Here is an example of small ASP in Afghanistan and some real facts about supply process told by the staff. One company resupplies ammunition for thousands of service members. This small company on Bagram Air Field is responsible for Northern and Eastern Afghanistan and they are the ones who deploy bullets and ordnance through rugged mountains of Afghanistan.

The 592nd Ordnance Company, a reserve unit attached to the 17th Combat Sustainment Support Battalion, operates the Bagram Ammunition Supply Point and they are unique: "Most ASPs in Afghanistan are user units," a soldier said. "They do inventory of the ordnance, track which unit comes into depot, and give ammo to the unit. What makes this ASP unique is we ship to other FOBs and give ammo to the units here, as well as shipping munitions to and from Kuwait," he said[13]. As the ammo is pulled from the yard, the soldiers inspect every pallets for defects or bad ammo.

Fig.3. Sgt. 1st Class Fred Fischer, an ammo platoon sergeant during preparation for an air drop delivery for an F.O.B

[12] E. Collins, *Medal of Honor nominee Romesha leads charge to retake COP Keating* http://www.isaf.nato.int/article/news/medal-of-honor-nominee-romesha-leads-charge-to-retake-cop-keating-2-of-3.html (05.05.2013).

[13] M. Vanpool, *From Bagram to the mountains,* http://www.army.mil/article/54694 (05.05.2013).

CONCLUSIONS

Ammunition materiel management functions are performed at the TSC, ESC, and sustainment brigade headquarters. These functions involve the overall management of authorizations and requirements and redistribution of ammunition assets within the theater. ASP are in the corps forward area, they provide direct support to the combat division or portions of the division and must store about minimum 3 days of ammunition.

The infrastructure of Afghanistan is under-developed with hard and bumpy terrain that why it's a serious challenge for Logistics to supply ammo by ground, air or sometimes air-dropped directly into a FOB. Ammunition moving by air is more complicated because it has to be checked, double-checked and loaded with precision so the weight distribution assures a safety flight without any kind of incidents.

Ammunition supplying is the ultimate goal of the Logistic. BAGRAM AIRFIELD, Afghanistan - According to Sgt.1st Class Fred Fischer, an ammunition platoon sergeant with the 592nd Ordnance Company, Soldiers can live without water and without food for a few days, but the Soldiers in the mountains cannot live for a minute without ammo.

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