Preparing Theater Ammunition Supply Points for Large-Scale Combat Operations

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A massive array of landing craft, barrage balloons, Allied troops, and equipment arrives mid-June 1944 at Omaha Beach in Normandy, France. (Photo courtesy of the U.S. National Archives. Image retouched by mikaul via Wikimedia Commons) The crucible for the Ordnance Department, like the individual fighting man, is the battlefield.

-Brig. Gen. Hal C. Pattison, U.S. Army, 17 June 1966

The U.S. Army Ordnance Corps has provided support for major combat operations during wars such as Operation Desert Storm in 1991 and, more recently, Operation Iraqi Freedom. However, these supporting efforts pale in comparison to the scale of those during World War II. The austere environment that the Allied forces faced in World War II offered little to no infrastructure for offloading supplies and poor road networks for moving provisions to the forward line of troops. As the Army transitions from counterinsurgency to preparing for large-scale combat operations (LSCO), the ammunition soldier must once again prepare for operations in joint security areas without robust infrastructure. Ports could be replaced with logistics over-the-shore (LOTS) delivery and earth-covered magazines with open storage. The Army must review historical lessons learned to recognize logistics culminating points overcome by past ordnance soldiers.

Strategic Support Area

The strategic support area includes the Army's

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organic industrial base and private-sector industrial complexes with capabilities to produce and maintain military munition systems to meet military requirements.1 The strategic support area encompasses the area extending from the continental United States to the joint security area within a theater of operations.² Ammunition may be shipped from Joint Munitions Command's production facilities throughout the continental United States

to a theater-level ammunition supply point (ASP). For LSCO, ammunition would flow in with forces and sustainment ammunition from Army pre-positioned stocks (APS) such as APS-3 (afloat) with pre-positioned sets, ammunition, operational project stocks, and activity sets.³ Army pre-positioned ammunition support to a theater of operation includes pre-positioned ammunition committed to an area—for example, APS-4 (Northeast Asia and Pacific)—and planned resupply of national-level munitions.⁴

Traditionally, ammunition support teams with quality assurance specialist ammunition surveillance and contract personnel are deployed to survey ports, serviceability of APS ammunition, and overall safety of munition operations. However, future LSCO might not follow the same pattern of essential support provided by civilian employees and contractors. The Army will have to rely heavily on ordnance soldiers in theater to perform the technical work done by civilians until sea lines of communication are open. The ordnance soldiers assigned to an ASP must be able to receive, configure, inspect, manage, and then ship and issue ammunition to support the theater.

Modular Ammunition Ordnance Company

The foundation of the Army's ammunition formations is the modular ammunition ordnance company, which provides ammunition support on an area basis within the theater area.⁵ Starting in the joint security area, the company ships ammunition to ammunition transfer and holding points in division and brigade support areas. The modular ammunition company consists of a headquarters with mission command capacity. It typically has three modular ammunition platoons and a modular ammunition rough terrain container handler augmentation team.⁶ Theater ASPs require one or more rough terrain container handler augmentation teams to operate.⁷

Unfortunately, the active duty Army only has six modular ammunition ordnance companies.⁸ There are three more ammunition companies and one ordnance (ammunition) battalion in Korea, but they are wartime host-nation support units, which operate with limited military personnel and are highly dependent on the local national workforce to complete assigned missions. With just over a handful of modular ammunition

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ordnance companies, the Army will have to rely even more on the Reserve Component for ordnance support during LSCO. The Army Reserve contains nearly 20 percent of the Army's units and a quarter of its mobilization base-expansion capacity.⁹ The National Guard is about 39 percent of the Army operational force.¹⁰ The integration of Army Reserve ordnance companies with various ammunition sections within



Notes:

1. Facility is not to scale.

2. Inbound line haul equipment is staged along a roadway (or accommodating area) outside of the marshalling area, with controlled entry into the yard.

(Figure from Army Techniques Publication 4-35, Munitions Operations and Distribution Techniques)

Figure 1. A Notional Layout of an Ammunition Supply Point



(Figure by H. Damon via the Library of Congress)

Figure 2. Omaha Beach and Beach Maintenance Area, 1944

the force to offset any shortages in personnel will be one of many requirements for operating theater ASPs. Another is the interoperability of ammunition operations between Army ordnance units, Marine Corps ammunition companies, Navy Munitions Command detachments, and Air Force munition squadrons.

Theater Ammunition Supply Points

An ASP is an ammunition support activity that is designated for receiving, storing, maintaining, and providing munitions support to Army forces at echelons above brigade.¹¹ ASPs are field, semifixed, or permanent storage areas of various sizes.¹² Current Army technique publications describe the ASP site selection process, recommending locations that minimize the need for engineer support near improved road networks for transportation.¹³ The ASP can be six square kilometers or larger, depending on the tactical situation and mission.¹⁴ Figure 1 (on page 45) depicts the ideal layout of a notional ASP.

One or more ammunition platoons operate an ASP. However, there are a limited number of active duty modular ammunition companies, and the technical skills needed to run a theater ASP surpass the internal capabilities of the ammunition ordnance companies. Army regulations allow trained military ammunition inspectors in the grade of staff sergeant or above to supplement and assist quality assurance specialist ammunition surveillance personnel.¹⁵ But ultimately, the Army's Ammunition Surveillance Program is managed and executed by Department of the Army (DA) civilian employees.¹⁶ These civilians possess the technical knowledge needed to run the Army's ammunition surveillance programs and are far more experienced in ammunition surveillance management than their military counterparts.

The Army must focus on ordnance soldiers who can perform theater-level ASP operations in austere conditions without the assistance of DA civilian employees. Soldiers within ammunition platoons must be able to conduct ammunition and explosives surveillance programs, inspect ammunition for serviceability, and assign condition codes. Other required tasks include determining storage compatibility and computing explosives safety quantity distances to ensure proper separation of ammunition sites and exposed sites.

Ammunition Dumps

Ammunition dump is an anachronistic term for any organized area designated for the reception, classification, storage, or issue of ammunition.¹⁷ For LSCO, it is necessary to have bulk munitions as close as feasibly possible to the forward line of troops. It is even more critical when the initial combat assault requires continuous resupply of munitions. These conditions have not been seen by ordnance soldiers since World War II operations such as Operation Overlord (Battle of Normandy), Operation Dragoon (the landings on Provence in Southern France), and Operation Iceberg (Battle of Okinawa). Omaha Beach, for example, is on the Normandy coast. The beach maintenance area and ammunition dumps had a level shelf of sand with patches of marsh grass and ravines forming exits to inland villages (see figure 2, page 46).¹⁸ For Operation Overlord, the ordnance officer for First Army, Col. John Medaris, planned to place nine ordnance battalions on Omaha Beach and five battalions at Utah Beach.¹⁹

The decision was to support the main effort of the Army with a forward support element as the Army went across France. One such unit was the 71st Ordnance Group (Ammunition Supply). The Ordnance Group consisted of two ammunition battalions of six companies each, one battalion to operate forward ASPs and the other to run the main army ammunition depot with reserve ammunition to stock the forward ASPs.²⁰ Along with the units coming across the English Channel, the ammunition came across on watercraft and barges in support of the Allied forces. The number of ammunition units provided an overwhelming amount of support for ordnance operations in the European theater of operations.

The amount of ammunition and the number of ASPs in the European theater during the first year of World War II was greater than those seen in wars such as Vietnam and Iraq. In Europe, the ordnance officer organized a mobile ASP, which was the only large-scale mobile ASP operated to any extent by any of the armies in World War II.²¹ For example, during eleven days of



(Figure courtesy of the Library of Congress)

Figure 3. First Army Ammunition Installations



Soldiers of the 618th Ordnance Ammunition Company use a crane to unload ammunition from a DUKW amphibious vehicle 15 August 1944 in Normandy, France. (Photo courtesy of the U.S. Signal Corps via the Library of Congress)

operations in August 1944, a mobile ASP handled 13,156 tons of ammunition.²² Figure 3 (on page 47) shows the number of ASPs throughout France in just half a year that enabled the Allies to push back German forces. The number of ordnance ammunition battalions and companies that were required is more than what is now in the U.S. Army on active duty. During this time frame, there were thirty-four ASPs, including mobile ASPs, from the beaches of Normandy to the German western front.

Ordnance Battalions (Ammunition)

Reliance on the Reserve Component will increase in LSCO. Combat sustainment support battalions will have to provide mission command like the ordnance battalions (ammunition). Current technique publications identify the ammunition support missions of the ordnance battalion (ammunition) and the combat sustainment support battalions as identical.²³ However, while the two organizations have the same mission, the ordnance battalion (ammunition) is the only unit dedicated to the command of ordnance companies and with the right mix of personnel for ammunition mission sets.

A historical example of this command relationship is the 528th Quartermaster Battalion (QMB) in Vietnam. The 528th QMB was organized like a petroleum supply battalion, but it was explicitly activated to provide a command structure for a newly formed ammunition battalion.²⁴ Despite the organization, the battalion received the correct personnel and assumed the ordnance support mission for the I Corps tactical zone through

to manage all aspects of supply in the I Corps area of

operations. The majority of shipments came to 628th

QMB by cargo ship from the United States or by in-

tratheater shipment.²⁷ Intratheater resupply came primarily from Cam Ranh Bay in South Vietnam, manned

by additional ordnance units.²⁸ The one battalion and

six companies in I Corps were just about the strength

companies, and the operations in Iraq and Afghanistan

of the current active duty ordnance (ammunition)

provided formable tests for ordnance (ammunition)

control of ordnance companies and detachments that were already on the ground and trained in ammunition supply functions (see figure 4).²⁵ The war in Vietnam required providing ammunition to troops fighting an enemy across a battlefield with no front line. Compared to World War II with its massive Army and corresponding support requirements, the ordnance (ammunition) units in Vietnam numbered just a few to handle the conflict. By November 1969, the 528th QMB provided mission command for six ASPs: 571st Ordnance Company with



⁽Figure courtesy of Veritas: Journal of Army Special Operations History 1, no. 2 [2005])

Figure 4. I Corps Ammunition Supply Points Controlled by 528th Quartermaster Battalion, Republic of Vietnam, 1960

ASP 102 at Camp Evans, ASP 103 at Phu Bai, and ASP 101 at Quảng Tri; the 661st Ordnance Company with ASP 105 at Chu Lai and ASP 106 at Đức Phổ; and the 40th Ordnance Company with ASP 107 at Da Nang.²⁶

The ordnance battalion (ammunition) provided mission command with dedicated ordnance companies

to support a division.³⁰ This reflects the nature of the counterinsurgencies the U.S. Army has been fighting, which required fewer personnel to operate fewer ASPs in a theater of operations, consequently requiring fewer active duty ordnance (ammunition) units. In 2011, the 80th Ordnance Battalion reflagged to the 13th Combat

units that operated ASPs.

Ordnance (Ammunition) Unit Transformation

The ammunition companies that operate ASPs today have undergone a transformation from those seen in the large-scale combat operations of World War II. But as the U.S. Army prepares for fighting peer threats, it must fill the gap left by that transformation in ordnance (ammunition) operations. That gap is the number of units recommended in doctrine. Ordnance field manuals during the World War II era prescribed six companies per ammunition battalion and two battalions per field army.²⁹ The current Army techniques publication for munitions distribution, Munitions **Operations and Distribution** Techniques, only offers a modular ammunition ordnance company with headquarters platoon and typically three modular ammunition platoons Sustainment Support Battalion.³¹ And in 2013, 83rd Ordnance Battalion, one of the last ordnance (ammunition) battalions, deactivated, but the ammunition mission was taken on by the Ammunition Depot, 10th Regional Support Group.³² The deactivation reduced the number of assignments available for ammunition soldiers to perform their wartime functions.

The U.S. Army is now down to only six active duty modular ordnance companies located at major installations with ASPs operated by logistics readiness centers. With contractor-run facilities and civilian-led organizations, the ability to train at ASPs is limited. The integration of soldiers, DA civilians, and contractors is inconsistent among various ASPs, and it is often stressed by soldier training requirements, contract concerns, and uncertainty about how to distribute the workload.³³ The disparity in and lack of available training has reduced the ability of ordnance (ammunition) units to perform the work without the Department of Defense employees who perform those ammunition functions. This is even more apparent in combat operations when it comes to ammunition surveillance functions, including inspecting and the classification of munitions.

During Operation Iraqi Freedom, the Combined Forces Land Component Command had seven ordnance ammunition companies, one ordnance ammunition battalion (minus), and one ordnance ammunition group (with one company and two platoons) in support of the invasion of Iraq.³⁴ The total included all of the continental U.S.-based active duty ordnance (ammunition) companies, but with support from an ammunition force comprised of Reserve Component units.

The number of ammunition units in Operation Iraqi Freedom was comparable to but did not reach the level required for the initial invasion of World War II. However, as the Army has transformed into a modular, expeditionary force, so too has the configuration of APS transformed into standard brigade combat team packages.³⁵ The ability to have ammunition and equipment in mission sets has reduced the required forward push of munitions and ammunition units into theaters, but the U.S. Army will still be dependent on the Reserve Component when it comes to LSCO. The question is whether the majority of the expertise regarding ammunition operations belongs in the Army Reserve and National Guard.

Ammunition Operations Training

In the active duty Army, logistics readiness centers perform the majority of ammunition functions on major Army installations. In the National Guard, garrison training centers provide full-time support at forty-seven ASPs in thirty-six states and one territory. The ASPs are organized and structured in the garrison training centers by regulation, not by current doctrine.³⁶ The ammunition support allows for National Guard units to have a reserve force that operates ASPs during times other than deployments. With ASP operations as a core function of the National Guard, many personnel assignments are for military technicians who are employees of the Department of Army and are required to maintain military membership to retain employment; they are referred to as dual-status technicians.³⁷ Examples of garrison training centers include Camp Navajo Ordnance Operations in Northern Arizona and Atterbury-Muscatatuck Training Center in Indiana; they provide training areas and have ASPs to support the Total Army force. The National Guard has invested in training centers such as the Utah Army National Guard's construction of an \$11.7 million state-of-theart ASP near the twenty-nine thousand-acre area of Camp Williams.³⁸ While the U.S. Army Reserve does not have the core function of managing ASPs, it depends on such areas for training.

The installations with the most ammunition management experience are those from the Joint Munitions Command (JMC). The organization operates a nationwide network of seventeen installations and facilities that produce and store conventional ammunition, and when needed, handle demilitarization.³⁹ These JMC installations are the country's center of ammunition production, providing ammunition and explosives to Army and National Guard ASPs and employing civilian employees with decades of experience in manufacturing. Installations such as Crane Army Ammunition Activity in Indiana provided the 321st Ordnance Battalion, an Army Reserve unit from West Virginia, the ability to conduct annual training that "focused on essential Soldier tasks and supporting ammunition logistics operations."40 And the 221st Ordnance Company from Fort Wayne, Indiana, "completed an ammunition crucible training exercise at Crane" to assess the unit's readiness.⁴¹

Such training opportunities are not only for companies and battalions. The JMC installations



(Figure from Field Manual 4-0, Sustainment Operations)

Figure 5. Distribution Network

can support echelons-above-brigade munitions units. The home of Joint Munitions Command, Rock Island Arsenal, Illinois, partnered with the Army Reserve's 103rd Expeditionary Sustainment Command during exercise Nationwide Move 2015 "to move approximately 2,500 short tons of munitions."⁴² With the support of JMC, reserve units have the opportunity to train with an organization and at an installation that manufactures, stores, and ships the Nation's wartime material.

Recommendation

Past experience has shown that the number of modular ammunition companies required in LSCO far exceeds the number available on active duty. Additionally, units throughout an area of operations are at various echelons. Modular ammunition companies conduct ammunition supply operations at the theater, corps, and other levels as required by the tactical situation.⁴³ The July 2019 revision of Field Manual 4-0, *Sustainment Operations*, states the following about theater-level ammunition: Planning should also include identifying locations within the AOR [area of responsibility] for a theater storage area and multiple ammunition supply points to provide redundant and robust storage capability in a forward location to receive stocks directly from the port and distribute laterally between supply points or to forward units.⁴⁴

To accomplish this, the Army must analyze where to place the mix of reserve and active duty ammunition units in the distribution network (see figure 5, page 51), knowing that there are not enough units in the Total Army force to provide ammunition support at the level seen in World War II.

With fiscal constraints, it is unrealistic that the Army will have an active duty ordnance group with two battalions, each with six ordnance companies. The trend now appears to be the deactivation of active duty units and the reliance on host nation support for current overseas ammunition operations in countries such as Korea and Japan. Currently, there are six modular ordnance companies under combat sustainment support commands. The modular ammunition company has succeeded in counterinsurgency operations, but the decreased number of ordnance companies may not provide the needed force for LSCO. To meet future requirements, the Army must bring back an active duty conventional ammunition ordnance battalion with three conventional ordnance (ammunition) companies in general support, *s*pecially designed for the mission to establish and operate multiple theater storage areas and with the responsibility for the receipt, storage, rewarehousing, shipping, and issuance of ammunition.⁴⁵

Conclusion

To prepare for LSCO against a peer enemy, the U.S. Army will have to support ground forces on a scale not seen since World War II. But during recent counterinsurgency operations, ammunition units provided area support in smaller storage locations with a reduction in ammunition short tons, and ammunition formations have been reduced correspondingly in numbers of units, personnel, and equipment. The Army has taken steps to prepare for LSCO with the placement of APS and bases around the globe, but it must take one more step. There must be at least one active duty conventional ammunition ordnance battalion that will provide the in-depth knowledge of munitions and the full span of support for the ammunition mission during an all-out war between nations.

Notes

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