

Before the Beaches: The Logistics of Operation Overlord and D-Day

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Military operations throughout human history have one uniting factor across all times and peoples. This factor is the need for supplies and men to fight. However this is not what is remembered in the newspapers or the ticker-tape parades of wars won or in retreat of armies defeated. The story of Operation Overlord, better known as D-Day, is well known. As the single largest amphibious invasion in the history of mankind, the operation not only marked the beginning of the end for the Third Reich and for World War Two, but also marked the end of the extensive preparation and build-up of material and men to land on the beaches of Normandy. This project seeks to explore the organizations and operations that made Operation Overlord possible and seeks to bring to light the extensive organization and coordination required to succeed in such an undertaking.

From the espionage efforts of Operation Quicksilver to misdirect Nazi Germany to acquiring the correct number and type of landing craft in Operation Bolero, Operation Overlord was an astounding undertaking the likes of which had never been attempted before. Importing more than 1.6 million United States infantry men and more than 5.5 million tons of war material to supply them required a herculean effort of both the US and British war machines which began two full years before troops touched sand. Acting as the foothold for the Western Front of the Allied effort, Operation Overlord would establish the supply line from the British Isles to the troops in Europe that would be essential for maintaining forward momentum toward Berlin. This presentation will focus on the particular Allied, US, and British organizations and operations that took the concept of a cross-channel assault and in two years successfully launched an invasion of a scale never seen before or since on the European Continent.

Before the Beaches: The Logistics of Operation OVERLORD and D-Day

In the history of warfare and military strategy, no element has been as crucial as logistics. In its very essence, logistics is the manner in which wars are waged. The old adage “an army marches on its stomach” is attributed to one of the greatest generals in history, Napoleon Bonaparte. Just as Napoleon and all other great military commanders of the past needed bullets and beans for their soldiers, so too did the commanders of the Allied Forces in World War Two. However, the commanders of World War Two had much more to contend with than Napoleon in the ways of logistics and planning. The Allied Forces were by definition individual countries that had come together to defeat a common enemy, but still had very different ideas about how to win the war with the Axis Powers. Logistics would play a significant role in the success of the Allied war effort, and was a top priority throughout the conflict. Merriam-Webster defines logistics as “the things that must be done to plan and organize a complicated activity or event that involves many people.”¹ Operation OVERLORD and specifically the sub-operation, Operation NEPTUNE, was the largest amphibious assault that had ever taken place and as such required herculean effort from the Allies over a period of two years from the conception of Operation BOLERO in April of 1942, to D-Day itself on June 6th 1944. The logistics involved in Operation OVERLORD and the logistics command structure of the Allies took years to develop and evolved incrementally, rather than a push all at once. This journey started with the creation of Operation BOLERO and continued onward through reorganizations and multiple operations to the final preparations for OVERLORD, supported by the deception efforts of Operation BODYGUARD.

¹ Dysart, Barry J. *The Big 'L'*. n.d. Web. 2 February 2014.

The crucial nature of logistics and the clearest evidence of the Allied successes in that area are best summed up by a German soldier who remarked after D-Day: “I know how you defeated us. You piled up supplies and then let them fall on us.”² The battle between the physical armies of the Allies and Axis powers was representative of the battle between each side’s industrial capacity turning the war into a war of logistics, or to the Germans a materialschlacht, “materiel battle”³. This battle began in earnest with the conception of Operation BOLERO in April of 1942. General Eisenhower was one of the first to recognize that the best way to break the German’s hold on Europe was through a cross-channel attack. However this idea was largely dismissed by the British as Eisenhower noted in his journal, “even among those who thought a direct assault by land forces would become necessary, the majority believed that definite signs of cracking German morale would have to appear” for the idea to be accepted.⁴ Knowing how unpopular the approach was, Eisenhower and four other War Plans staff members secretly devised a cross-channel invasion strategy that would eventually become the BOLERO/ROUNDUP plan. The plan called for a buildup of men, vehicles, and supplies (BOLERO) and an invasion of Europe immediately following the buildup (ROUNDUP).

Once the plan was completed, Eisenhower presented the strategy to General Marshall who following the briefing immediately said “This is it. I approve.”⁵ The following week, Marshall sent Eisenhower to brief then-Secretary of State Henry Stimson on the proposed invasion. Stimson approved, and Eisenhower was cleared to create a final proposal which was then codenamed BOLERO. Once reviewed by Stimson and General Marshall, BOLERO was presented to President Roosevelt in a White House meeting. When questioned by Roosevelt on

² Dysart, Barry J. *The Big 'L'*. n.d. Section 339. Web. 2 February 2014.

³ Dysart, Barry J. *The Big 'L'*. n.d. Section 339. Web. 2 February 2014.

⁴ Smith, J. E. (2012), pg 188. “Eisenhower in War and Peace”. New York: Random House.

⁵ Smith, J. E. (2012), pg 189. “Eisenhower in War and Peace”. New York: Random House.

possible alternatives, Marshall stood his ground and convinced Roosevelt to give the approval to finish the details of the strategy. Once this approval was given, Eisenhower completed the plan and submitted the finalized edit on April 1st 1942. The plan even received the support of the British and ROUNDUP was slated to take place in 1943. BOLERO was quickly put in danger by an overzealous Roosevelt wanting to send troops and war material to Australia rather than leaving them for the invasion, but was saved when Roosevelt just as quickly backtracked as not to throw off the invasion timeline. With BOLERO and ROUNDUP on schedule to commence the following year, Marshall sent Eisenhower to England to review the American Command in Britain, but more importantly, to introduce Eisenhower to the British commanders with whom all decisions on joint operations and logistics would have to be made.

Eisenhower made note of the importance of the buildup of BOLERO and the ROUNDUP invasion, remarking that: “We’ve got to go to Europe and fight and we’ve got to quit wasting resources all over the world, and still worse, wasting time.”⁶ The suggested remedy to the thinly spread Allied resources was to maintain a defensive in the Pacific and to focus fully on the European front. This strategy was adopted and BOLERO soon came to signify the drive for a central strategic plan.⁷ The ability to get supplies to troops was of paramount concern to the Allies, and was one of the reasons behind northern France being selected as the invasion point for ROUNDUP. As protecting the shipping lanes was key to the BOLERO buildup in Britain for the invasion slated in 1943, an invasion of northwest Europe could simultaneously protect the British and also further secure the vital shipping channels that would allow supplies and troops to flow from the United States to Europe. The main goal of the logistics for BOLERO and ROUNDUP was to amass strength in the United Kingdom and to establish a secure base close to

⁶ *Case History: Drafting the BOLERO Plan*. Section 144. 19 October 2004. Web. 1 March 2014.

⁷ *Case History: Drafting the BOLERO Plan*. Section 145. 19 October 2004. Web. 1 March 2014.

the enemy from which both land and air operations could easily be supplied and supported⁸. This however was not a straight forward task as the allies had to first reconcile their approaches to war as well as working under the knowledge that they were fighting a global conflict with limited resources. As a result, logistics was of paramount concern and served as the foundation of major decisions including the location of BOLERO and ROUNDUP as mentioned above. The drive of logistics was complicated both by the conflicting approaches of the Allies, but also by the overlapping logistics organizations that existed in the American chain of command which would not be addressed until 1943.

The major conflict over logistics command before the command restructure in 1943 was between the Services of Supply (SOS) and the theater headquarters in Europe. The commanding officer of SOS, General Lee proposed a plan where SOS would oversee all supply services and arms under SOS control. Theater command objected because under this proposal, SOS would have command over troops of other commands. Theater command was eventually designated the European Theater of Operations, United States Army (ETOUSA), but this did nothing to solve the issue. It wasn't until Eisenhower took command of the theater that the issue was resolved by redefining command relationships and giving SOS oversight of administrative and supply planning for the theater⁹.

Eisenhower took command of the American forces in the European theater soon after his submission of the BOLERO/ ROUNDUP plan and immediately set about fixing the issues that plagued the American command there. This rebuilding of the command structure was much needed and helped Eisenhower to build a command that could more easily interact with the

⁸ Dysart, Barry J. *The Big 'L'*. n.d. Section 340. Web. 2 February 2014.

⁹ Dysart, Barry J. *The Big 'L'*. n.d. Section 344-345. Web. 2 February 2014.

British commands and helped to ease the discussion of logistics for BOLERO and ROUNDUP. After the British accepted BOLERO, buildup began that included the construction of airfields for bombing runs as well as importation of 750,000 ground forces for the anticipated invasion in 1943.¹⁰

An essential element to these plans and to the buildup as a whole was the shipping available to transport the supplies and men needed for the ROUNDUP invasion planned to commence in 1943. Basic issues for BOLERO revolved around what was to be moved, where it was to be moved, and when it needed to arrive. This was complicated by a parallel buildup for Operation SLEDGEHAMMER, a contingency invasion planned in case the Allies were forced to move earlier than anticipated. While these operations both called for a buildup in the United Kingdom, BOLERO was a slow consistent flow, while SLEDGEHAMMER called for very rapid accumulation of men and supplies.¹¹ These conflicting operations were further complicated by the limitations of the supply of British labor, the constraints of the British infrastructure, and the global shortage of desperately needed shipping.

All of these issues were compounded by the conflicting ideas that the American and British commands had, regarding the timing of the ROUNDUP invasion and the BOLERO buildup. This issue was resolved by the Marshall Memorandum which outlined combat strength, advantages of operations in Western Europe, timing, and above all the objective of the BOLERO/ROUNDUP plan.¹² Under the assumptions made in the memorandum and with the constraints mentioned above in place, the US estimated it could provide close to one million men

¹⁰ Dysart, Barry J. *The Big 'L'*. n.d. Section 345. Web. 2 February 2014.

¹¹ Dysart, Barry J. *The Big 'L'*. n.d. Section 349. Web. 2 February 2014

¹² *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 155. Web. 1 March 2014.

and 3,250 aircraft for the ROUNDUP invasion.¹³ This plan also emphasized the importance of shipping and landing craft in the success of the strategy. After the memorandum was issued and accepted by the British, SOS began organizing the influx of supplies and preparing for the planned ROUNDUP invasion. However, SOS would soon be replaced as the head logistics coordinator in the European Theater.

The end goal of BOLERO was to prepare for the ROUNDUP invasion, and one of the major logistic concerns for the operation were the landing crafts to be used in a cross-channel invasion. No operation like BOLERO had ever been attempted before and as a result the allies had no idea how many and what type of landing crafts were needed. United States manufacturing began to produce the needed craft in earnest beginning in April of 1942, and soon began to mass produce both landing craft for troops and heavier ocean-going craft for vehicles as well as troops.¹⁴ This was later essential to Operation OVERLORD and also for the earlier Operation TORCH in North Africa. World War Two had a number of large scale amphibious assaults conducted by the Allies, and with each successive operation, the planners at both SOS and in other commands began to better understand the logistical needs for large scale invasions.

By mid-April in 1942, the BOLERO plan was the official policy of the British-American command, and the buildup began in earnest.¹⁵ This allowed the Army planners to incorporate the strategy into day-to-day staff work and planning. The two most critical elements to this planning were the production of both the landing crafts which had begun earlier in the month, and also the production of bombers to perform raids across the channel to soften German defenses before ROUNDUP. Once BOLERO became official policy, Eisenhower proposed that officers from the

¹³ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 156. Web. 1 March 2014.

¹⁴ Dysart, Barry J. *The Big 'L'*. n.d. Section 347-348. Web. 2 February 2014

¹⁵ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 158. Web. 1 March 2014.

US Operations Division's (OPD) Logistics Group establish a master committee to help ease the many issues that were plaguing the operation¹⁶. This plan was adopted and the BOLERO Combined Committee was formed consisting of three US officers and three British officers and American Colonel Hull acting as the committee chairman¹⁷. This new committee replaced SOS as the chief logistics planners in the European Theater.

The committee's main objective was to "outline, co-ordinate, and supervise all British-American plans for moving, receiving, and maintaining American forces in the United Kingdom".¹⁸ A major part of this objective was the estimation of troop requirements and availability as well as requirements and availability of both equipment and facilities to house the troops and equipment. Additionally studies were done of the total force allocation of American and British forces, shipping, port facilities, naval escorts, and a multitude of other top level logistics concerns for the BOLERO buildup¹⁹. These focuses eventually transformed the BOLERO Committee into a shipping agency that also had control over equipment and troop levels shipped over to the United Kingdom.

To consolidate logistics command under one roof, Colonel Hull was placed at the head of the European Theater Section as well as remaining chairman of the BOLERO Combined Committee. This meant that Colonel Hull was in effective command of everything connected to BOLERO movements. This also allowed the OPD's Theater Section to much more easily coordinate with the War Department regarding organization, equipping, transporting, and training ground and air units for BOLERO²⁰. OPD's Logistics Group further contributed to the

¹⁶ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 160. Web. 1 March 2014.

¹⁷ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 160. Web. 1 March 2014.

¹⁸ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 160. Web. 1 March 2014.

¹⁹ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 160. Web. 1 March 2014.

²⁰ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 161. Web. 1 March 2014.

BOLERO plans through General Eisenhower's negotiations with the British in May and June of 1942. Eisenhower addressed the concerns the British had regarding BOLERO and ROUNDUP and helped build stronger relations between the two commands²¹. When he returned to the US, Eisenhower remarked that for BOLERO and ROUNDUP to succeed, the US needed to "get a punch behind the jab" and that "We must get going!"²² This prompted General Marshall to appoint an OPD officer to do just that, showing that Eisenhower had become instrumental in connecting Marshall's command in Washington to the British command.

Despite the changes made in the command structure and the successful buildup of forces in Britain, BOLERO and ROUNDUP had to be postponed due to missing the mark of logistic feasibility. There was simply not enough shipping to transport the needed men and goods to Britain to ensure a victorious invasion of Europe, with only 57,000 troops and 279,000 pounds of goods in Britain by the fall of the 1942²³. That pace would put the Allies woefully behind projections and leave any invasion force severely lacking in both men and supplies. In addition, landing craft production had not met previous estimations and would not be able to provide enough support to transport even the small amount of troops and gear assembled in Britain to the shores of Northern Europe. Despite this fact, the Allies were determined to launch a major offensive in 1943 to take the pressure off of the Eastern front, and choose to invade North Africa in an operation codenamed TORCH²⁴.

Operation TORCH proved to be the best thing to happen to the logistics planners in the SOS and also in the BOLERO Combined Committee. As TORCH would be the largest

²¹ *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 162. Web. 1 March 2014.

²² *Case History: Drafting the BOLERO Plan*. 19 October 2004. Section 162. Web. 1 March 2014.

²³ Dysart, Barry J. *The Big 'L'*. n.d. Section 352. Web. 2 February 2014

²⁴ *The TORCH Period*. 19 October 2004. Section 161. Web. 1 March 2014

amphibious assault to ever take place, it would provide an unparalleled opportunity to test the logistical planning ability of the Allies as well as test the follow through of that planning while facing opposition. TORCH, while not intended to be a dry run for Operation OVERLORD, allowed the Allies to make changes and adjustments to their approach before the planning of OVERLORD and greatly contributed to the success of the later operation.

Operation TORCH began by taking the logistics planners of the BOLERO operation and put them to work planning the invasion of North Africa. The BOLERO buildup of Britain would still continue in the background of Allied operations, but due to the time constraints placed on TORCH, the BOLERO planners had to quickly shift gears from slow and steady to a fast paced and hastily put together operation. The discussion over timing, location, size, and other variables of the landing were the major responsibilities of the logistics planners of the OPD Logistics Group and SOS²⁵. One of the major issues facing these planners was the scarcity of landing craft appropriate for troops and material²⁶ which had plagued the Allies since BOLERO. This shift also caused the Logistics Group to approach strategy and logistics planning differently, by distinguishing problems arising in joint and combined committee systems that could be handled within the interservice planning system, and those problems that could be solved between theater commanders and the Chief of Staff²⁷.

One of the most impactful elements of the logistics planning for Operation OVERLORD was the lessons learned during the planning for TORCH. As the Allies had only 100 days to prepare for TORCH before the operation launched, logistics planning, while at the heart of

²⁵ Dysart, Barry J. *The Big 'L'*. n.d. section 355. Web. 2 February 2014.

²⁶ Dysart, Barry J. *The Big 'L'*. n.d. section 355. Web. 2 February 2014.

²⁷ *The TORCH Period*. 19 October 2004. Section 161. Web. 1 March 2014.

strategy planning, was rushed and did not exemplify the ideals of organization or efficiency²⁸.

SOS was placed at the head of logistics planning for TORCH while the BOLERO Combined Committee continued to amass supplies and material in Britain.

TORCH was to be supplied from the stocks already on sight on in Britain, but in the early stages of BOLERO when SOS was still at the helm of logistics planning, accurate documentation of stockpile inventories were not made as supplies were moved to storage as quickly as possible to avoid congestion²⁹. There was not nearly enough time to make the needed inventory list of required material, and as a result, all of the supplies needed for the TORCH invasion had to be reordered and shipped from the United States. The required amount of supplies totaled 260,000 tons of material to replace the undocumented equipment, which was requested with a confession of failure by the logistics organizations of both SOS and the theater command³⁰. However the message was not clear on details of the required supplies and had to be resent. The issues with supply and logistics became so prevalent that General Eisenhower assigned a General from his staff to focus all of his attention singularly on the logistic and supply issues.

Luckily the Allies recovered and once all of the required goods were reshipped to Britain and distributed accordingly, the Allies launched the TORCH invasion successfully and made contact with German forces for the first time³¹. Following the successful TORCH operation, Allied leadership met for the first time at Casablanca to address the issue of logistics going forward, and how to avoid the mistakes of TORCH for the eventual cross-channel invasion of Northern Europe. The main divisions of the logistics discussions revolved around how the

²⁸ Dysart, Barry J. *The Big 'L'*. n.d. section 355. Web. 2 February 2014.

²⁹ Dysart, Barry J. *The Big 'L'*. n.d. section 355. Web. 2 February 2014.

³⁰ Dysart, Barry J. *The Big 'L'*. n.d. section 356. Web. 2 February 2014.

³¹ Dysart, Barry J. *The Big 'L'*. n.d. section 356. Web. 2 February 2014.

American's and the British viewed their supply of resources. To the British who had been fighting on the Western front largely alone for years before the US entered the war, supplies were limited and had to be rationed out carefully among the multitude of pressing operations. To the American's who had just recently entered the war, the acceleration of the American military mobilization suggested that supplies would soon be plentiful and that the shortages faced during the BOLERO/ROUNDUP and TORCH planning were merely transitional issues as the US entered Total War³². This difference would prove to be the major obstacle between the American and British delegations agreeing on a set date for the cross-channel invasion.

Among the other pressing issues of debate in the Casablanca conference, the issue of landing craft was of the greatest importance. As all other major operations in the war would begin in the sea, the issue of landing craft had to be addressed quickly. Based on Operation TORCH and with the cross-channel invasion in mind, General Eisenhower estimated that any invasion of Northern Europe would require double the amount of landing craft that had been used in the TORCH invasion³³. However the Allies did not have the logistical capacity to produce that number of craft in time for an invasion in 1943. This meant any invasion would have to occur at the earliest in 1944, and this plan was agreed upon with tentative commitment by the Combined Chiefs during the conference. This agreement in turn was the catalyst for the creation of the Chief of Staff Supreme Allied Commander (COSSAC) to oversee the pre-invasion planning for 1944³⁴.

Also following the Casablanca Conference, the activities of the OPD Logistics Group began to become independent and stand out as such. The Logistics Group became more

³² Dysart, Barry J. *The Big 'L'*. n.d. section 358. Web. 2 February 2014.

³³ Dysart, Barry J. *The Big 'L'*. n.d. section 359. Web. 2 February 2014.

³⁴ Dysart, Barry J. *The Big 'L'*. n.d. section 360. Web. 2 February 2014.

influential and held sway over major military decisions as the authorities on the current state of US Army needs, supply, and production³⁵. This growing independence of logistical work was soon followed by major adjustments in the practice and theory of American joint planning. After the TORCH invasion and the beginning of BOLERO starting in earnest again, it was clear that American planning would to focus more heavily in the area of joint committee work and that the strategies and orders themselves would need to be made more clearly defined in its relation to other joint committees and their work³⁶. This shift in focus resulted in an OPD much more focused on the aspects of joint command and diplomatic solutions to interservice issues. The OPD's work in planning and logistical analysis from this point on, were almost entirely within either the British-American or Navy-Army staff system. This was however characterized by the OPD's consistent reference to the cross-channel assault, which was the only fixed point of the Allied strategy at the time³⁷.

The OPD's joint planning was also characterized by their preference to exercise influence by advising General Marshall in Washington, rather than by discussion with their colleagues on the Joint Staff Planners or the Joint Strategic Committee (JCS)³⁸. As a result many of the essential aspects of combined planning evolved outside the JCS system as the OPD served as advisors to General Marshall. This lack of unity in planning showed in the aftermath of Casablanca as the head of the OPD delegation there said: "We came, we listened, and we were conquered"³⁹. Throughout the conference it had become readily apparent that the British delegation was much more prepared and much larger than the American delegation, and that the

³⁵ *The TORCH Period*. 19 October 2004. Section 175. Web. 1 March 2014.

³⁶ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 234. Web. 1 March 2014.

³⁷ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 234. Web. 1 March 2014

³⁸ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 234. Web. 1 March 2014

³⁹ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 235. Web. 1 March 2014

Americans needed to improve on the British model of detail orientation and strong stances. Seeing the need to improve the American joint committee system, an investigation of all JCS sub-agencies and an investigation of the JCS itself took place. These investigations revealed inefficiencies in both the entirety of the JCS and also within the Joint Planning Staff (JPS).

Soon after the investigations were completed, a special committee was established to restructure the entire joint system to better address the issues of the war and to better plan for both overall strategy and operational logistics. The reorganization of the JPS was especially crucial for logistics as JPS was attempting to advise the JCS on logistics in general as well as addressing special military questions that did not affect the development of strategy. These questions while not directly affecting strategy still had to be decided in conjunction with the strategy that was developed⁴⁰. The solution was to split the responsibilities of the JPS into two sections and to create a new joint committee which would be singularly focused on the logistical aspects of JPS's old responsibilities. The committee that was formed was called the Joint Logistics Committee (JLC) and was responsible for assisting in the planning of all joint logistical needs including transport, acquisition, and rationing of supplies for future operations.

The new committee was met with skepticism and many officers wanted the JPS to remain a key component of the JCS planning process. This view soon became policy, but the JLC remained intact and retained its position within the joint planning of logistics. As planning for the cross-channel assault continued it became more and more important for the JPS to trust not only themselves but also junior members like the JLC to address the monumental task of planning the war in Europe. Even with the creation of the JLC to deal with the procurement of supplies, the reorganization investigations found that the JPS lacked any committee or

⁴⁰ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 237. Web. 1 March 2014

organization to deal with the joint plans that did not fall under broad long term strategy. To remedy this oversight, the Joint War Plans Committee (JWPC) was created, and operated directly under the JPS. This committee was formed at the perfect moment to aide in the TRIDENT conference held in Washington to discuss the cross-channel invasion and the planning going into the invasion. This additional support in planning aided greatly to the success of the TRIDENT conference and to the British finally agreeing to a set a tentative date for a cross-channel invasion called Operation OVERLORD⁴¹.

Once the date was set on Operation OVERLORD, the JWC began its staff work and by the end of the 1943 had joint strategic planning well on its way and continued to provide support for the rest of the war in this manner. Despite the improvements made and the addition of the JWC, the bulk of operational planning still fell on the overseas theater staff. The JWPC's main function became to develop outlines for operational needs in the future and was assisted by the OPD in its efforts⁴². With the JWPC translating the views of individual services in to joint war plans, close relationships with the agencies that formed official policy were crucial. Relations with the OPD, whom carefully went through every plan to come out of the JCS, were also crucial to the planning process. Planning in this way gave commanders a solid base to launch from and saved time that would have been wasted doing that work.

The initial restructure of 1943 allowed the American joint planning system to keep pace with the British staff that had overtaken the Americans during the Casablanca Conference. The changes made by the summer of 1943 allowed the Americans and British to deliberate on more equal ground and was instrumental in allowing the American's to give voice to their logistic and

⁴¹ *Midwar International Military Conferences*. 19 October 2004. Web. 1 March 2014

⁴² *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 241. Web. 1 March 2014

strategic ideas and concerns for the coming Operation OVERLORD. To further the improvements made to the American joint planning system, General Marshall instituted the policy of allowing American planners to act freely without undo interference from higher authorities⁴³. As the British had more than ten times the amount of planners, and thus ten times the advocates, the focus of American planners was not to try to match numbers, but to be a step ahead of the British and to be a united force to ensure their logistic and strategic initiatives were easily defended and to present a consistent stance across each of the organizations involved. The new approach of the American planners also emphasized taking the initiative whenever possible, and having prepared lines of defense if forced to retreat⁴⁴.

With these focuses in mind and in the midst of the joint committee reorganization, the American planners prepared for the QUADRANT conference which was the first military conference post TRIDENT where American planners could test their changes. The goal of the Americans at QUADRANT was to secure a more definitive commitment from the British on Operation OVERLORD and to begin to set to prepare for the size of the force and the supplies needed⁴⁵. It was also the goal of the American planners to place Operation OVERLORD as the top priority of Allied strategy and to convince the British to table any major military offensives in the Mediterranean area. This was achieved by the American delegation and the OVERLORD plans were outlined and approved to be the “primary operation” in Europe by American and British forces⁴⁶. However the issue of resources for the OVERLORD invasion remained vague. The British had agreed to use only the forces approved in the TRIDENT conference for any operations in the Mediterranean, and finally committed fully to preserving all other resources to

⁴³ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 246. Web. 1 March 2014.

⁴⁴ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 247. Web. 1 March 2014

⁴⁵ *Midwar International Military Conferences*. 19 October 2004. Section 223. Web. 1 March 2014.

⁴⁶ *Midwar International Military Conferences*. 19 October 2004. Section 223. Web. 1 March 2014.

Operation OVERLORD. This move was a sign that the British had overcome their hesitation over resources which had been rooted in the difference in how American and British planners viewed resources. This agreement signaled not only a definitive commitment by the British to support and conserve resources for OVERLORD, it also signaled that the British and Americans were seeing the concept of resources and logistical feasibility in a much more similar light than before.

Following the QUADRANT conference and the completion of the reorganization of strategic planning, more attention was placed on logistic specific planning. The successes of the reorganization up to this point had been derived from the division of labor of the JPS and the creation of the JWPC. Logistics however was a specialized field and operated largely outside the JPS structure. This stage of joint reorganization saw the field of logistical planning coming into its own as a distinct type of military planning, and separate from the strategic planning that it had been so closely tied to in the past. Up until this point in the war, logistics had meant everything and anything needed to carry out the strategic plans of the Army⁴⁷. The war thus far had used relatively simple means of estimating logistic needs and made strategic decisions based on these simple calculations. The reorganization of 1943 saw the logistics planners and Army planners in general attempting to further simplify the calculations used which had started to become quite complex in the wake of total war. These adjustments to the calculations would provide a more solid base from which Army and joint strategic plans could be decided on as well as guide the complex efforts of the industrial complex of civilians and soldiers working to provide the requirements for the eight million men of the US Army⁴⁸.

⁴⁷ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 256. Web. 1 March 2014

⁴⁸ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 257. Web. 1 March 2014

During the reorganization the SOS was rechristened the Army Service Forces (ASF) and was charged with directing the collection and distribution of supplies for the interior. This detail required a further simplification of logistic data and the ASF increasingly collecting the logistic data⁴⁹. The OPD retained its oversight of translating strategic choices into logistic requirements and also continued to determine logistic policy by dealing directly with the ASF where the logistics data was compiled and simplified. The influence of the ASF and the importance of its duties grew as the operations planned for the war in Europe became more and more complex, such as Operation OVERLORD which was planned for the next coming year. The aftermath of the early BOLERO efforts and the TORCH invasion underscored the need for amicable relations between strategy and logistic planners, and this became the central focus of the American joint planning in their preparations for OVERLORD⁵⁰.

While logistics staffs were becoming increasingly independent, the joint planners still did not give the logistic organizations any authority in the decisions made about Ally strategy. Logistics specialists were consulted, but the attitude of the planners was that war was too unpredictable to allow for accurate calculation of the needs of future operations⁵¹. The strategic planners however were sure to make decisions as early as possible and make liberal estimates of operational needs so that in the event of a sudden drastic change in supply availability or logistic ability, the planned strategy would not fall apart. The 1943 reorganization and the logistic concerns of the year became more and more a question of not the importance of logistical facts,

⁴⁹ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 257. Web. 1 March 2014

⁵⁰ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 257. Web. 1 March 2014

⁵¹ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 258. Web. 1 March 2014

for that had been established by BOLERO and TORCH, but was instead the decision over what body should translate those facts⁵².

A report in March of 1943 sparked a long controversy over both the ASF representation in joint agencies and the question of which organization within the War Department was truly responsible for planning logistic activities⁵³. The proposals that followed resembled the British attitude that logisticians were meant to know the facts of supply, but could not be relied upon to use these facts to formulate strategy. The head of the ASF disagreed vigorously and stated that: “Unless you are represented on the Planners by an able officer who knows supply, its ramifications, requirements, adaptability, production, availability, ect...you will be badly served, the Army will suffer the war will suffer, and America will suffer”⁵⁴. The need for logistics staff from the ASF to be present became even more apparent when it was remarked that neither the Strategy and Policy Group nor the Army planner had the “time to become experts on shipping, landing craft, naval matters, and the like”⁵⁵. In the face of the many issues that arose during the BOLERO and TORCH operations, such an attitude would have severely damaged the planning accuracy of the supply logistics for Operation OVERLORD.

A compromise was reached to avoid this pitfall, but the issue of joint logistics and strategic planning was still left undecided. This meant that logistic planning could occur in small steps and depended on strategic planning to make decisions before the logistics could be addressed. This was further complicated by the conflicting view the British and Americans had regarding not only logistics, but also the overall strategy to win the war in Europe. The issue of

⁵² *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 258. Web. 1 March 2014

⁵³ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 259. Web. 1 March 2014

⁵⁴ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 259. Web. 1 March 2014

⁵⁵ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 260. Web. 1 March 2014

logistics however was soon addressed by the President in July of 1943⁵⁶. The President expressed a desire to have logistics and strategy planning occur concurrently to allow logistics planning to make the kind of dependable estimations of troop and material requirements strategy needed as strategy was making decisions. This was met with some resistance as the head of the JCS, General Somervell, wanted to keep logistics planning under his authority. To do this, Somervell issued a recommendation stating that the current state of logistics planning was in an “excellent state of balance”⁵⁷ and that there was no need to create a truly independent logistics entity.

The OPD rebutted pointing out that while the JCS had created the Joint Administrative Committee (JAC), it was wrong to say that the committee was created to combine logistic and strategic planning in the way the President wanted it to be done. JWPC followed the OPD’s lead and also submitted a recommendation to the JPS stating the need for better communication between logistic and strategic planners and optimally more cooperation and coordination between the two sections⁵⁸. The JWPC went on to back the OPD’s statement by stating that there was not a joint committee or agency whose responsibility was specific to “preparation and revision of broad long-range programs for mobilization, deployment, troop bases, training, equipment and supply, and transportation”⁵⁹. To answer these recommendations and to fulfill the President’s request, the JLC redrew its charter and proposed that it become the organization suggested by the OPD and the JWPC.

⁵⁶ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 261. Web. 1 March 2014

⁵⁷ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 262. Web. 1 March 2014

⁵⁸ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 262. Web. 1 March 2014

⁵⁹ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 262. Web. 1 March 2014

This proposal was challenged on the grounds that the proposed oversight of the JLC would share responsibility on an equal level with the JPS which was considered superior in the joint committee chain of command. To solve the dilemma, the JLC charter was revised to place the JLC in an advisory role to the JPS, rather than an equal entity in planning. With this adjustment, the JLC officially re-charted October 13th of 1943 and became the “primary logistics advisory and planning agency of the Joint Chiefs of Staff”⁶⁰. This established the logistics planning of the war on equal advisory levels with the comparative strategic joint committees and was further strengthened by the creation of the Joint Logistics Planning Committee later in that same year. By the end of 1943, the JLC was the premiere logistics planning entity in the joint committee system and was considered to be on the same level as the JWPC which was the premiere strategic planning entity, and was soon comparable to the JPS itself.

Following these changes in the logistics planning section of the war, the OPD also made adjustments within its own Logistics Group, raising its status to become on equal level as the OPD Theater Group, and inferior only to the Deputy Chief of the OPD⁶¹ as shown below:

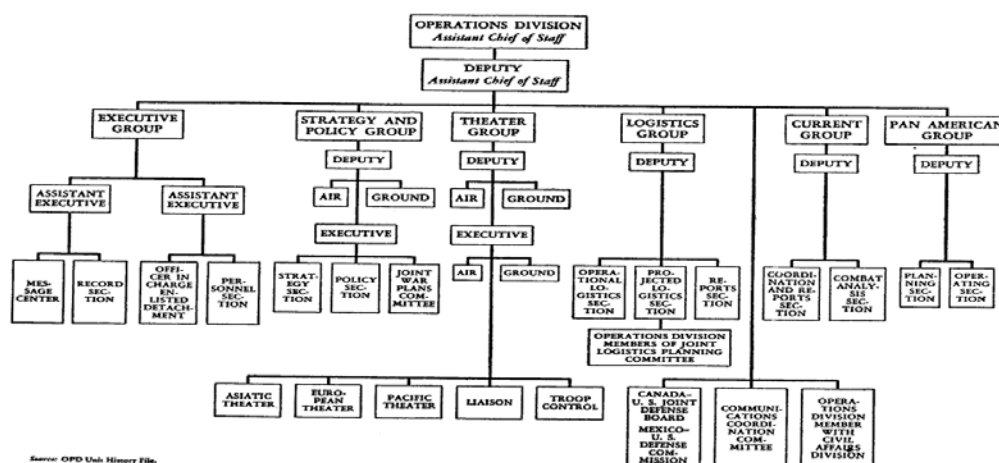


Chart 4. Operations Division, War Department General Staff: 27 April 1945

⁶⁰ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 263. Web. 1 March 2014

⁶¹ *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 264. Web. 1 March 2014

As the logistics planning for Operation OVERLORD intensified, both the Logistics Group in the OPD and the superior JLC found that they needed more officers to keep up with the strenuous demands placed on their committees. This need was underscored by a JLC statement which said: “By its nature, logistical planning requires exhaustive and detailed investigations which are matters of high urgency resulting in heavy peak loads”⁶². Soon after the JLC’s statement, they were provided with twenty newly appointed members. These new members occupied roles very similar to officers placed in the JWPC and served to further cement the JLC’s new position as an equal to the JWPC in planning and in the joint committee system. Throughout the reorganization of 1943, logistics planning came to the forefront of planning, and the many changes to the JCS and the OPD as well as the re-charter of the JLC allowed for the logistics planning of Operation OVERLORD to be given the appropriate attention that it required. Without the reorganization, logistics would not have occupied the same influential role in joint planning and would have made the planning of Operation OVERLORD and the continuation of Operation BOLERO to be much more complicated and inefficient.

The next military conference of Allied leadership following QUADRANT was codenamed SEXTANT and ran from the 22nd of November to the 7th of December of 1943⁶³. SEXTANT would be the first time that American planners had prepared for such a meeting with strategic and logistics planners running parallel to the other. The major objective for the American planners at the SEXTANT conference was to confirm once and for all the British dedication to the OVERLORD invasion. This conference was the final time for the British to either “fish or cut the bait”⁶⁴. The American planners went into SEXTANT confident having

⁶² *OPD and Joint Planning (1943-45)*. 19 October 2004. Section 265. Web. 1 March 2014

⁶³ *Midwar International Military Conferences*. 19 October 2004. Section 226. Web. 1 March 2014.

⁶⁴ *Midwar International Military Conferences*. 19 October 2004. Section 226. Web. 1 March 2014.

made excellent progress in the QUADRANT conference and having just finalized the reorganization of both American strategic and logistic joint planning.

However the conference was not as easy as the QUADRANT conference with Prime Minister Churchill stating: “OVERLORD remained at the top of the bill, but this operation should not be a tyrant to rule out every other activity in the Mediterranean”⁶⁵. This statement opened the floor up to the British and American delegations once again debating the virtue of a cross-channel assault versus continued offensives in Italy. This debate did last long as for the first time Marshal Stalin and a delegation of Russians joined the American and British delegations to give voice to the Soviets fighting the Eastern Front.

Stalin and his delegation sided unmistakably with the American delegation for making OVERLORD the central focus of the American and British strategic operations to occur in 1944⁶⁶. This pressure from the Soviets halted all notions of abandoning Operation OVERLORD and finally allowed the full attention of both the American and British planners to be placed on the preparations for the cross-channel assault. QUADRANT also secured the commitment of the Soviets to launch a large scale offensive in the East timed with the OVERLORD invasion to prevent the Germans from fully reinforcing the coastline once the invasion began. These commitments were drawn up and the final strategy for Allied victory in Europe began to be planned in earnest. Upon the return of the OPD officers to Washington after the SEXTANT conference, the Logistics Group quickly briefed the top brass on the critical issue of landing craft availability and the requirements that they projected OVERLORD would have⁶⁷.

⁶⁵ *Midwar International Military Conferences*. 19 October 2004. Section 227-228. Web. 1 March 2014.

⁶⁶ *Midwar International Military Conferences*. 19 October 2004. Section 228. Web. 1 March 2014

⁶⁷ *Midwar International Military Conferences*. 19 October 2004. Section 229. Web. 1 March 2014

The implementation of the decisions made at SEXTANT began immediately following the conclusion of the conference, and ran through to the end of the month⁶⁸. The SEXTANT conference and the decisions rendered there signaled that the course for Allied planning was finally set, and that it could no longer be changed. This meant that all strategic and logistic planning would now be dedicated fully to the OVERLORD invasion, and that any planning for the future would have to wait until the success or failure of OVERLORD.

The logistics planning required for Operation OVERLORD was of a scale never before seen in the history of warfare. The Allied goal was to have a total of more than 1.4 million troops in the European theater by original OVERLORD invasion date of May 1st 1944⁶⁹. Of these forces, air troops were given priority to begin the bombing raids on German defenses to soften them before the troops hit the beaches of Normandy. The only way to have the staggering amount of men shipped in was to allow SOS troops to arrive with very little training to expedite the shipment of both men and goods. With the integration of logistics planners into the strategic planning decisions many of issues seen in the initial BOLERO buildup and the supply disaster preparing TORCH were avoided.

The goal of OVERLORD was to establish a forward base of operations for the Allies to move into mainland Europe. With this in mind, logistics planning had to account not only for just the men and equipment used in the first days of the invasion, but also plans on how to sustain those troops and how to gather enough supplies to drop on the Germans. One of the most crucial aspects to this planning much like the planning for TORCH was the availability of landing craft. This aspect was of such importance that the simultaneous ANVIL invasion of southern France

⁶⁸ *Midwar International Military Conferences*. 19 October 2004. Section 230. Web. 1 March 2014

⁶⁹ Dysart, Barry J. *The Big 'L'*. n.d. Section 363. Web. 2 February 2014

had to be cut in half to just a single division to ensure that OVERLORD received all the needed craft for men, vehicles, and material⁷⁰. Throughout the planning of the OVERLORD invasion both the JLC and Logistics Group of the OPD were the major drivers of all logistic planning. These plans had to provide for the landing of 20,111 vehicles and 176,475 ground troops on D-Day (date of invasion) and D-plus-1 (the day after D-Day)⁷¹. The sheer scale of the OVERLORD invasion eventually led to the postponing of ANVIL simply to supply the huge amount landing craft needed to launch OVERLORD.

The buildup in Britain continued in full force once again under the designation of BOLERO. Each month approximately 750,000 tons of supplies alone were coming in Britain under the supervision of the Logistics Group and the JLC until by the beginning of OVERLORD in June 1944, more than 1.9 million tons of war material had been gathered on Britain's shores⁷². This was added to the already stockpiled goods from both the initial BOLERO buildup and the small buildup over the course of TORCH to total more than 2.5 million tons of war material was earmarked for the invasion of OVERLORD alone.

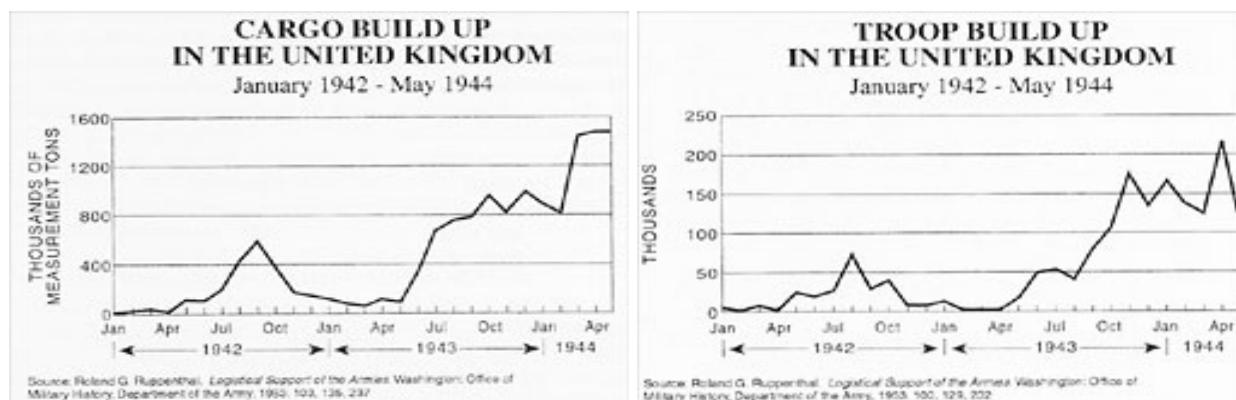
This rise in supply occurred simultaneously with an equally remarkable buildup of more than 1.3 million troops in less than a year⁷³. These numbers proved that the logistics and strategic reorganization was a major success and that the lessons learned from TORCH had been heeded. Two charts show this remarkable buildup marking the initial BOLERO buildup in the summer/fall of 1942, the impact of TORCH from December 1942 to April of 1943, and finally the secondary BOLERO buildup for OVERLORD:

⁷⁰ *D-Day Logistical Problems*. n.d. Web. 16 February 2014.

⁷¹ *D-Day Logistical Problems*. n.d. Web. 16 February 2014.

⁷² *D-Day Logistical Problems*. n.d. Web. 16 February 2014.

⁷³ *D-Day Logistical Problems*. n.d. Web. 16 February 2014.



Source: Roland G. Ruppenthal, *Logistical Support of the Armies*, Washington, Office of Military History, Department of the Army, 1953.

With the logistics of getting troops and material to Britain well underway, logistics now had to turn its attention to planning the transport of the men and goods built up in Britain to the shores of Normandy. One of the most crucial elements to this phase of planning was how to acquire undamaged docks for offloading and how to offload goods. This was complicated by the possibility that the Germans sabotaged the existing docks, or were destroyed during the invasion. Additionally, the issue of providing cover for the landing craft while they unloaded became a top priority.

The solution to the issue of ports came when it was decided that the Allies should build synthetic harbors rather than rely on the harbors in place in Normandy that would be open to damage and sabotage⁷⁴. These false harbors were dubbed “Mulberry” harbors and were designed to float with the tide⁷⁵. These were developed under the supervision of COSSAC and constructed two such harbors over the course of 1943 to ensure the existence of a means to unload the millions of tons of supplies and more than a million troops destined for mainland Europe. To

⁷⁴ Svonavec, Stephen. *Logistical Support of the Armies*. n.d. section 270 Web. 16 February 2014.

⁷⁵ Svonavec, Stephen. *Logistical Support of the Armies*. n.d. section 271 Web. 16 February 2014.

solve the issue of cover, the British Directorate of Ports and Inland Water Transport moved to prepare sixty ships filled with concrete that would be towed across the channel to provide cover for the unloading of supplies and troops from the landing craft⁷⁶.

These preparations completed the major logistic and support planning required by the Allies before the invasion. Through a long journey of logistic planning, screw ups, reorganization, and final preparation, OVERLORD was finally at hand and would serve as the proving ground for all of the planning done so far. However there was one other factor that allowed all of the planning of both the logistics and strategic staff to occur and was ultimately responsible for the victory of OVERLORD. This factor was the elaborate deception and spy efforts of Operation BODYGUARD by the Allies to misdirect the Germans as well as the German's own miscalculations. Without these efforts all the logistical planning done by the Allies would have amounted to nothing.

Operation BODYGUARD was the Allied deception launched during 1944 to convince the Germans that the OVERLORD invasion was not happening at Normandy, but was happening at Pas de Calais. It was impossible for the Allies to cover the fact that massive amounts of material and men were flowing into England throughout 1943 and the early months of 1944. This meant that to ensure the success of the invasion, the Germans had to be misdirected to prevent further reinforcement of the Normandy beaches. Two of the most essential pieces to BODYGUARD and its sub-operation QUICKSILVER were the creation of the ghost army FUSAG and the efforts of one of the most successful double agents working for the British codenamed Garbo.

⁷⁶ Gilbert, Martin. "D-Day." Gilbert, Martin. D-Day. Hoboken: John Wiley & Sons, Inc, 2004. 39-40. Print

These actions would prove invaluable as unbeknownst to the Allied leadership; Hitler at the beginning of 1944 has issued Führer Directive No. 51 which called for the German military command to reinforce the likely areas of Allied invasion even at the expense of losing ground to the Soviets⁷⁷. To ensure that the Germans focused on the Pas de Calais, Allied leadership created the fictitious First United States Army Group which was designated FUSAG. To give credence to the lie, General George Patton was placed at the head of FUSAG and the Allies allowed this knowledge to be leaked to the Germans through the numerous double agents working for the British. The German's feared and respected Patton more than any other Allied general from his exploits in North Africa and Italy and was even known among the Allies as "Old Blood and Guts"⁷⁸. This assignment served to not only convince the Germans that the Allies had an army poised to invade Pas de Calais, it served as a suitable punishment for Patton whom had just recently slapped a soldier in the Italian campaign.

However, just the name of a famous general and a name on paperwork would not be enough to fully convince the Germans of a pending invading force. To eliminate all doubt, the Allies purposely posted FUSAG in Dover England which was close enough to allow for German intelligence gathering, as well as being poised directly across from Pas de Calais⁷⁹. Fake radio chatter was started up to provide evidence of the FUSAG command, and a few real soldiers were assigned to FUSAG before the invasion to show a physical presence, but this would not be enough to impress the German reconnaissance planes that would no doubt be searching for this imminent threat to the Third Reich.

⁷⁷ Gilbert, Martin. "D-Day." Gilbert, Martin. D-Day. Hoboken: John Wiley & Sons, Inc, 2004. 39-40. Book

⁷⁸ Soniak, Matt. FUSAG: *The Ghost Army of World War II*. 13 April 2012. Web. 2 March 2014.

⁷⁹ Soniak, Matt. FUSAG: *The Ghost Army of World War II*. 13 April 2012. Web. 2 March 2014.

To provide a sufficiently impressive physical presence to match the radio chatter and reports of British double agents, the Allies built a semi-real base of command including mess facilities, ammo catches, troop tents, and even fake tanks and jeeps made of wood and cloth or inflated rubber⁸⁰. The Allies even went so far as to assign a task force of troops to move the false vehicles around daily and invented a special tool for creating the tracks made by the vehicles⁸¹. These creations combined with a false harbor complete with false landing craft created an illusion so convincing that even after the OVERLORD invasion began, Hitler refused to relocate Pas de Calais troops to reinforce the German divisions at Normandy.

The second crucial aspect to the success of OVERLORD and also the successful deception of FUSAG were the British double agents working in the Double Cross system. One of the most important of these spies was Juan Pujol Garcia, codenamed Garbo. Garbo had built his reputation within the German spy networks over the course of the war and was recognized as a top operative during Operation TORCH when the British allowed him to leak information regarding the invasion⁸². By the time that Operation OVERLORD was to take place, the Germans considered Garbo to be one of their best and never questioned the information that he passed to them.

Garbo began his deception regarding OVERLORD immediately following the Casablanca Conference, and began to build a massive network of imagined sub-agents which Garbo used to both to convince the Germans of his sincerity and also to provide a means of substantiating the false information he was feeding to his German handlers. Garbo reported that he and his network saw buildup of divisions of troops in locations around both the FUSAG ghost

⁸⁰ Soniak, Matt. *FUSAG: The Ghost Army of World War II*. 13 April 2012. Web. 2 March 2014.

⁸¹ Soniak, Matt. *FUSAG: The Ghost Army of World War II*. 13 April 2012. Web. 2 March 2014.

⁸² Macintyre, Ben. *Double Cross*. New York: Random House, Inc, 2012. Print.

army and the actual OVERLORD base, and reported that his subagents had seen naval buildups at the false FUSAG base near Dover⁸³.

As OVERLORD neared, the Garbo network consisted of 24 fictional agents all reporting information with only Garbo himself actually existing⁸⁴. This network would send 4 messages a day wirelessly to Garbo's German handlers, and Garbo was given access to the actual plans of OVERLORD and all of the plans relating to German misdirection efforts⁸⁵. Garbo had become the most trusted spy of World War Two who never questioned by either his true employers the British, or the Germans whom he expertly duped. As the Germans sent increasingly detailed requests about the logistics of Allied efforts including troop movements and supply, Garbo directed the false information supplied by Allied command and diverted German focus away from real supply points. These contributions from the Garbo and FUSAG deceptions of Operation QUICKSILVER and BODYGUARD ensured the secrecy of logistics of Operation OVERLORD and allowed for the invasion to occur without a single unplanned leak of intelligence to the Germans⁸⁶.

The logistical planning of Operation OVERLORD was unlike any other military operation in the history of warfare to that point. Beginning in 1942 with the initial buildup of BOLERO, a multitude of factors including a total restructure of joint strategic and logistics planning had to occur to make Operation OVERLORD and the invasion of Normandy possible. These efforts were backed by the perfectly executed deceptions of Operation BODYGUARD and Operation QUICKSILVER and created whole networks of fake spies and a fake army to

⁸³ Macintyre, Ben. *Double Cross*. New York: Random House, Inc, 2012. Print.

⁸⁴ Macintyre, Ben. *Double Cross*. New York: Random House, Inc, 2012. Print.

⁸⁵ Macintyre, Ben. *Double Cross*. New York: Random House, Inc, 2012. Print.

⁸⁶ *D-Day Logistical Problems*. n.d. Web. 16 February 2014.

misdirect German intelligence and to ensure the secrecy of the planning done for the invasion.

All of these efforts allowed for the landing of more than 156,000 troops on June 6th 1944 spread across five beaches, and more than 22,000 airborne troops deployed behind the lines⁸⁷. The true success of the logistics planning done by the JLC and the OPD's Logistics Group as well as the Operation BODYGUARD deception can be summed up by a quote from a captured German soldier who said of D-Day that: "I cannot understand these Americans. Each night we know we have cut them to pieces, inflicted heavy casualties, mowed down their transport...but in the morning, we are suddenly faced with fresh faced battalions, with complete reinforcements...if I did not see it with my own eyes, I would say it was impossible to give this kind of support to front-line troops..."⁸⁸.

⁸⁷ Sayre, Rob. *The Process and Logistics of D-Day*. 7 June 2009. Web. 2 February 2014.

⁸⁸ *D-Day Logistical Problems*. n.d. Web. 16 February 2014.