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FOR

CORRESPONDENCE COURSE IN LOGISTICS

The Establishment of Advanced Naval Bases in the Central Pacific Area As seen by the Advanced Base Section Service Force, U.S. Pacific Fleet

DEPARTMENT OF CORRESPONDENCE COURSES

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THE ESTABLISHMENT OF ADVANCED NAVAL BASES IN THE CENTRAL PACIFIC AREA AS SEEN BY THE ADVANCED BASE SECTION, SERVICE FORCE, U.S. PACIFIC FLEET

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COMMANDER SERVICE FORCE
UNITED STATES PACIFIC FLEET
ADVANCED BASE SECTION

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Serial: 400

10 December 1945

From: Officer in Charge, Advanced Base Section.
To : Commander Service Force, U. S. Pacific Fleet.

Subject: Report on The Establishment of Advanced Naval Bases in the Central Pacific Area as seen by the Advanced Base Section, Service Force, U. S. Pacific Fleet - Forwarding of.

Enclosure: (A) Subject Report.

1. Subject report is submitted herewith.

H. E. ECCLES.

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/s/ A. J. Wellings

A. J. WELLINGS,
Chief of Staff.

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I

INTRODUCTION

The preparation of an accurate and comprehensive report of the Advanced Bases of the Central Pacific is a task which will take years of work. The principal sources of material for such a report will be found chiefly in the Histories and Reports of the various Bases, the Combat Reports and War Diaries of the Fleet and Task Force and Garrison Force Commanders charged with the assault of the Targets and the development of the Bases, and in the report of the Chief of Naval Operations and the reports of all the Bureaus of the Navy Department.

The part the Service Force, U.S. Pacific Fleet, played in this great Shore Base Development is partially told in the Official History of the Advanced Base Section of the Service Force. This is primarily a description of the component parts, their organization, their tasks, and the names of the officers and men who did the work of the Section. Thus the Section History is essential to an understanding of the complexity and magnitude of the problem. (See Annex K)

The official History of Service Squadron Twelve the "Harbor Stretcher" is of major importance to any study of Advanced Bases in the Pacific.

The report of the Chief of the Bureau of Yards and Docks, especially that section which deals with the SeaBees, will probably always constitute the best single source of information on this subject. However, that will not tell the whole story, for while BuDocks furnished about 80 per cent of the material and equipment that went into the Bases, and while the SeaBees did the major part of construction on Advanced Bases, we must remember that their effort was directed toward furnishing and building the shore facilities by which the Fleet was supported, and that the General Service Officers and men of the Pacific Fleet operated the great majority of these facilities.

Therefore, this section of the Service Force Report is primarily concerned with the tasks and problems of those men.

The extent of this is indicated by the following tabulation of units organized and sent to the forward area under the direction of the Advanced Base Section of Service Force.

The figures are approximate in that many augmentations were made and the population of Naval Bases fluctuated. These figures do not include SeaBees except where specially indicated because in most instances the Construction Battalions operated under the command of the Island Commander and were therefore not under the Naval Base Commander.

APPROXIMATE PEAK PERSONNEL STRENGTHS NAVAL ADVANCED BASES
PACIFIC OCEAN AREAS PLANNED BY ADVANCED BASE SECTION SERVICE FORCE

LOCATION	BASIC ORGANIZATION	TOTAL PERSONNEL
MAKIN	GroPac 1	336
KWAJALEIN	GroPac 2	1,469
ROI NAMUR	GroPac 3	244
MAJURO	GroPac 4	503
	GroPac 5	283
ENIWETOK	GroPac 5	370
ENGEBI	GroPac 7	363
TINIAN	GroPac 6 (Augmented)	2,137
SAIPAN	GroPac 8 (Augmented)	8,420
GUAM	LION 6 (Augmented)	15,231
ULITHI	SLCU 34 & Naval Activities	1,314
PELELIU	GroPac 9	994
ANGUAR	GroPac 10	967
LEYTE	CUB 12	3,257
IWO JIMA	GroPac 11	1,404
OKINAWA	LION 8, CUB 17 & Naval Activities	33,572
IE SHIMA	GroPac 12	1,177
YOKOSUKA	LION 9 (Includes CB's)	7,557
SASEBO	CUB 18 (Includes CB's)	6,929
TIENTSIN	CUB 19 (Includes CB's)	3,464
TSINGTAO	GroPac 13 (Includes CB's)	3,424
TOTAL		93,415

During the period from November 1943 to 15 September 1945, the Advanced Base Section of Service Force was charged with the procurement and shipment of all naval personnel and material for Advanced Bases in the Central Pacific with the exception of aviation personnel and material at naval aviation bases and activities. In addition, it was its responsibility to supervise the organization of the units which established the Naval Bases and Naval Operating Bases. This involved training and organization of large numbers of personnel, particularly for use in the early echelons, at the Advanced Base Personnel Administration at Iroquois Point and a very close interest in the training and organization of even larger units on the West Coast. In addition to this, the Advanced Base Section of Service Force represented all such units in the preliminary planning of the bases. This required very close liaison with Cincpac, ComAirPac, Fleet Marine Force, Amphibious Forces, the Army Air Forces, and with prospective Island and Garrison Commanders. Furthermore, after the establishment of bases, frequent trips were made to the Forward Area by the Officer in Charge of the Advanced Base Section and his subordinates, both on general and specific projects. These trips involved considerable discussion with the Area, Sub-Area, and Island Commanders. The Officer in Charge of the Advanced Base Section conducted a voluminous personal correspondence with the above-mentioned authorities and their senior subordinates and with the Naval Base Commanders and their department heads. Based upon this experience, the combat reports, war diaries, and personal letters, certain conclusions have been reached.

It should be remembered that the Central Pacific campaign was conducted under great pressure and the timetable was so speeded up that many operations telescoped and the period for planning in each operation was very short. This shortness of time made it necessary for high commands to make quick decisions on matters of broad policy, and the shortness of time and the distances separating the forward combat zone and the various headquarters of Fleet and Force Commanders made it extremely difficult to fully analyze and discuss the lessons of each campaign. Thus, any conclusions which may be

drawn as to the wisdom of any policy should be interpreted as a considered opinion, based on a deliberate review of the evidence, and in no sense as a criticism of any individual group who made decisions under the stress of the great pressures which existed throughout the campaign.

If there appears to be an undue emphasis on the troubles encountered and the faults disclosed, it should be remembered that when things ran smoothly and as planned, very little was said. The troubles were real and immediate, the personnel was living under conditions of great mental and physical stress, and there is a definite obligation to the future to recognize and to correct as many as possible of the faults of the past.

Marginal notes appearing in the body of this report refer to numbered paragraphs in Annex A.

II

GENERAL

The war against Japan, which involved the entire area of the Pacific Ocean as an actual combatant theater was fought under most adverse conditions. The Japanese and their weapons were only one, and not always the greatest element with which to contend because there were many other forces that had to be overcome before actual contact with the enemy could be established. It was a well recognized fact that all operations in this theater must be conducted at great distance from the source of supply of manpower and materials and that amphibious warfare must play a major role. Combatant ships could not operate and sustain themselves for any length of time without bases close by from which to draw full support in the nature of replenishment of supplies, necessary repairs, protection from weather and adequate air cover. Advanced bases were, therefore, as necessary as the ships and guns of the fleet and had to be established in rapid succession regardless of time, distance, and opposition by the enemy and the elements. In the main, these bases had to be established on islands that dotted the vast theater of operations. These small land masses consisted largely of volcanic rock outcroppings or coral formations which had grown up from the shallow depths of the ocean floor. By far the greater portion of these islands are fringed by a coral reef which made amphibious landings very difficult in the full face of enemy fire. The almost inevitable reef also made it difficult to develop permanent harbor facilities after the objective was taken because of long, slow dredging processes.

363, 372 In many cases the smallness of these land masses and their low elevation made the supply of fresh water a problem and it was necessary to either transport fresh water or depend upon distillation of sea water. Proper sanitation was likewise difficult. Many tropical disease and poisonous plant and animal life added to the difficulties of establishing these bases.

1,5,6,8 Since many of these islands are in the typhoon belt, bad weather and its possible devastating results on base installations had to be borne constantly in mind.

The native population, whether of Japanese or other origin, presented a problem of security and an obligation for care and subsistence, and in most instances provided little or no labor. The islands provided almost no usable resources, though some usable timber was found in a few locations.

The transport of building materials over tremendous distances was a herculean task and if adequate deposits of live coral had not been found, in most instances the required progress in establishing advanced bases could not have been made. The hot and humid climate of most of the area depleted the white man's vitality and corroded and otherwise destroyed his tools and equipment. From the brief mention above of a few of the conditions under which the Pacific bases were established, it can readily be visualized that many and varied problems were presented which taxed the ingenuity, stamina, and engineering ability of Navy personnel of all ranks and rates.

There was a very great difference between the types of bases built on the coral atolls of the Gilbert and Marshalls where the land area was extremely limited and the harbor area very large, and the huge installations where the land mass was large and the harbor area small.

In the atolls, the problem resolved itself into a rapid construction of small air fields and facilities for their support and the provision ashore of Port Director organizations for control of the vast amount of shipping anchored in the large atolls, operation and maintenance of boats for the fleet, and Fleet Recreation.

In the largerislands, the air fields were still primary, but
7 they were much larger, took longer to build, and required much greater supporting facilities. In addition, large hospitals, large camps for
2,3,4 the rehabilitation of combat troops, large ship repair facilities, major ammunition depots, amphibious boat pools, and elaborate road nets

to connect all these, were constructed. Furthermore, headquarters for the Fleet and Type Commanders were provided at certain bases, necessitating very large and complete communication facilities.

There was the further complication of the necessity for the rapid extension of the harbors, by dredging and breakwater construction, and the need for construction of wharves, piers, transit sheds, and other facilities to handle the great quantities of cargo which had to be unloaded and distributed.

In many instances the magnitude and importance of these supporting activities were not realized. This is understandable for several reasons. In the first place, the earliest possible operation of airfields was of the greatest importance in order to:

(1) Furnish shore-based fighter protection to the ships in the vicinity and to the base itself.

(2) Develop rapidly the air striking power of the base to keep an ever mounting intensity of attack on the enemy.

At times it was not appreciated that major airfields alone, without proper and efficient harbor facilities, did not constitute an efficient base of operations. Furthermore, airfield rehabilitation and construction are usually more rapid than harbor development and the construction of Fleet facilities; delays in airfield work are immediately noticed and corrected as mistakes become apparent in a matter of weeks. However, in the case of the Fleet facilities, which take months to build, delays are not so noticeable and basic mistakes or omissions may not become evident to the Area Commander until after the time for correction has passed.

Another important factor is that operating Fleet and Task Force Commanders were rarely concerned with the details of Base Development Plans and frequently were not aware that Fleet Support Developments were either very low on the construction priority or else were intentionally omitted from the plan by CincPac. Furthermore, Base Development was very properly the responsibility of the Army or Marine General commanding the island.

However, Task Force Commanders had very little sympathy for the naval officer who carried the title, "Commander Naval Base Navassa", but who had no facilities with which to perform his task. The Commanders afloat expected boat and recreation facilities and frequently dumped personnel ashore to be cared for in non-existent Receiving Stations. When the services were not provided or were, as frequently in fact, gravely inadequate, the Naval Base Commander was held responsible in the eyes of the Fleet.

In the official reports and analysis of the Operations in the Central Pacific, there is relatively little comment on the development and problems of Naval Bases. There are several reasons for this. In the first place, the officers on the bases seldom had the time to write good official reports. Their organizations were frequently inadequate and they were swamped with operational paper work. Secondly, many of the problems encountered were due to conflicts of personalities and officers were naturally reluctant to put these on paper. This was particularly due to the fact that most instances the Naval Base Commanders were junior to the Commanding Officers of other organizations on the islands. In any event, they were frequently "behind the eight ball", and they felt that official reports would be interpreted as self-justification and "complaining". Finally, very few of the senior Line officers of the Navy have any real conception of the problems involved. Line officers of the Navy as a whole have taken Logistics for granted and have felt that service in a Logistic Force lowered their prestige and adversely affected their chances for promotion.

In the field of Logistics Assignments, Advanced Naval Base Duty had the least prestige in the minds of Line Officers. Time and again officers made efforts to avoid this duty and in some instances, after gaining invaluable experience in the establishment of a base, they would be transferred to a sea command as a reward for doing a good job. Thus, the experience of our best officers tended to be lost.

Many of the Regular officers on duty in Bases are on the retired list or may shortly be retired, due to having been repeatedly passed over. The Reserve officers, who ~~found~~ formed the great majority on Advanced Bases are returning to Civil life.

It, therefore, appears likely that, if in five or ten years we be faced with an emergency calling for the rapid establishment of bases, we shall be in about the same position as we were in 1942. The KNOW-HOW will be missing.

III PLANNING

LOGISTIC PLANNING

The comment is frequently made that Naval Staffs tend to be too large. Logistic Planning for forces as large as those involved in the Pacific War must be large. It was notable that the expansion of the Logistics Staffs of Cincpac and Service Force barely kept pace with the work load. However, the fact that few naval officers are trained to do staff work, and very few have a broad knowledge of logistics reduces the efficiency of the logistic staffs. However, the greatest handicap to good logistic planning is the lack of enthusiasm of Line officers for this type of duty, which is usually considered unpleasant and undesirable. Frequently one hears the comment, "Oh, thats a Supply Officer's job". Until the attitude disappears we cannot expect real improvement.

The Advanced Base Section of the Service Force was composed almost entirely of Reserve Officers, the status as of 1 August 1945 being: 4 Regular, 131 Reserve. One of the major advantages of this was that it utilized the special experience and ability of officers with extensive business and industrial background who, in many instances were better qualified to do this type of work than were the officers of the Regular Navy. The mature background of civilian success that made these officers so valuable to the Navy also caused them to be among the first to go to inactive duty.

To attain this, the following is recommended:

19,20,21

(a) Educate all officers of the Line and Staff Corps in Basic Logistics.

(b) Recognize the important of Logistics by promotion of officers who have performed outstanding Logistic service without regard to their so-called "combatant ship" services.

(c) Select for instruction at the Naval War College and the Army Navy Staff College only those officers whose records and service reputations indicate that they have

better than average chances of promotion and future selection for important Staff and command billets.

(d) Give serious consideration to the formation of a General Staff Corps in the Navy, composed of officers of the Line and present Staff Corps.

ADVANCED BASE PLANNING

Planning for an advanced base must necessarily involve a multiplicity of considerations to assure that nothing is overlooked in providing adequate and complete support for the forces afloat and ashore. An advanced base must, therefore, consist of the greater
12,22 portion of the essential elements of an average continental city, in infinite detail, yet adapted to military requirements, so that it can be transported and erected very rapidly. This complete whole, including the manpower to make it function, must be conceived and integrated into separate units in order to load it out in such a fashion that when it arrives at the site, it can be erected in a smooth and orderly fashion with the least amount of confusion possible if it is to serve its purpose and meet the rapidly changing time schedule set by the progress of the war.

The planning officer is always confronted with the problem of getting the right thing at the right place at the right time in the proper quantity. In a project of this kind every item is relative to some other item or phase of the construction of the base and it is
24 important that nothing be overlooked and that materials not arrive prior to the time needed. If this latter condition prevails, it not only adds to the very confused initial stages of the establishment, but slows down the progress by compelling the personnel to unload and store equipment before adequate storage space is available. Limited time,
23 bad weather, and restricted area in which to work always are added to enemy opposition as factors contributing to the very difficult problem of establishing an advanced base.

Planning starts with the general concept and purpose as expressed in studies made by the Joint Staffs and, when the forward area situation dictates that a Cincpac directive should be issued, Comservpac and other Type Commander planners have usually formulated very definite ideas about the required manpower and materials. The Type Commanders are consulted prior to the issuance of the directive so that it will cover all the desired features and major details. This Cincpac directive is couched in very general terms and it is the responsibility of the Type Commanders to see that all proper elements are included in the base. The Type Commander planners must visualize all the
25 possible contingencies that may arise due to geography, hydrography, climate, and a multiplicity of other factors. A time schedule is set by the directive and all attention is focused on making adequate yet not excessive manpower and material available at the site in proper sequence to accomplish this rather involved task, the Type
27,28 Commander planners must necessarily have thorough knowledge of the how, when, and why of advanced base materials and personnel, and to be able to visualize the base in its complete state, being sure not to overlook the apparently insignificant details that almost invariably
15 are the difference between success and failure. The Planners must also assist in training the Staff of the prospective base. From the foregoing, it can readily be seen that planning any advanced base must carry through the echeloning of shipments and follow through with the inevitable adjustments in the original concept dictated
15,26,30 by changing conditions. A great deal of the planning will, of necessity, be done at the base itself.

Cincpac set a date at which each of the proposed facilities must be operably complete. Meeting this schedule required careful and informed calculations of beach capacity. This was a matter of the utmost importance because upon its accuracy depended the whole shipping system and in many instances the feasibility of the operation itself.

The problem of Beach Capacity and the preparation of Shipping Schedules was the province of the Cincpoa Logistical Section and is presumably dealt with in detail in their official report. It is no exaggeration to state that this was the key to all operations. In almost every operation the Type Commanders proffered more cargo than the beach capacity permitted.

The Echelon Conferences conducted by Cincpoa were a bright spot in the history of the Army-Navy relationships for it was in these conferences that the planning officers of the Type Commanders took their hair down and attained an understanding of the other man's problems.

In addition to adjusting their cargo loadings to the allowed shipping space, the cargoes had to be adjusted to the construction program. The adjustments could be understood and made only by experienced officers. An echeloning conference was no place for an amateur. The competition for shipping space was keen and compromise and disappointments were inevitable-but the conferences did prove conclusively that Army-Navy cooperation in its truest sense can be attained when competent officers, with a knowledge of the situation, meet together with their cards face up on the table.

The Method of Planning as set up for the Invasion of OKINAWA is considered excellent.

In this, all Cincpac and Type Commanders had their headquarters in PEARL HARBOR and initial estimates could be rapidly correlated. There were, of course, discrepancies which were, however, primarily due to the fact that the Staffs of the Invasion and Garrison Forces were late in assembling and were in many cases not familiar with Planning Procedures.

It was unfortunate that shortly thereafter Cincpac established Advanced Base Headquarters at GUAM, and the division of command whereby CinCAFPac, with Headquarters at MANILA, assumed command of all Army Forces in the pacific took place. It was not feasible to move all Planning to GUAM or MANILA and, therefore, the major plans for

OLYMPIC were being formulated at PEARL HARBOR, GUAM, and MANILA. This not only put a tremendous added load on the Communication System,
18 and placed an extra and serious physical strain on the Planning Officers who made long and tiring liaison flights back and forth, but it caused a marked increase in discrepancies and misunderstandings. Thus much of the advantage of intimate personal understanding, which had been achieved in PEARL HARBOR, was lost.

Imperfect reconnaissance and unforeseen changes in plans make it impossible to prepare a detailed plan for the construction of a base in advance with any assurance that major changes will not have to be made on the spot after occupation.

The functional Component System provides the best method yet devised to provide for the needs of the base, but it does not provide an adequate reserve for emergencies and necessary changes particularly in regard to lumber, cement, and other construction materials. To supplement the components, Construction Material Pool
29 ships were sent in to the MARIANAS in the fall of 1944. These provided much of the material for the expansion of the original plan for these islands.

The same idea was further developed in the OKINAWA Campaign and such ships were part of the original Echelon Schedule as shown in Annex B. Provision for similar ships should be made in any future operation.

The material sent in on these ships should constitute the Island Commander's Construction Material Pool and should be used at the discretion of the Island Commander. Such an arrangement eliminates the undesirable pooling of the construction material which is an inherent and necessary part of a component.

No discussion of material can be complete without emphasizing the excellent work done by officers of the Supply Corps and the Bureau of Supplies and Accounts in the development of the BBB Load, Navy Standard type "A" block and in improving the methods of handling

cargo by palletizing and by equipping and training Advanced Material Handling Groups.

The following references are of interest in further study of those developments:

BuSandA AKS-BBB Load List, 1 March 1945.

BuSandA Advanced Base Supply Handbook, May 1945.

PLANNING AND PROCUREMENT

The system of procurement, in which CNO, the Bureaus, and ComWesSeaFron were given forecasts of requirements for specific operations as soon as possible, was entirely satisfactory. These forecasts, forwarded from three weeks to three months prior to the mailing of the firm order, gave these authorities invaluable time to prepare for the operation.

Further time was saved by giving a wide distribution to the forecasts and by preparing the orders form that further rapid distribution could be readily made. An essential point is that the forwarding letters carry the Top Secret information while the actual material lists by virtue of use of shipping designators contain only Secret information and thus can carry a lower classification.

The organization of ComWesSeaFrontier and the cooperation between ComWesSeaFron, CNO, and the Bureaus were of outstanding value. This command has no suggestions as to any improvements required for a future emergency.

Of essential importance was the rapidity and intelligence with which spot decisions were made on the West Coast.

Shut-out cargo will always be a troublesome factor which cannot be wholly prevented. However, special care should be taken to inform the Type and Unit Commander in detail of short shipments in order
73 (a) to enable them to make emergency substitution if necessary and (b) to avoid sending frantic dispatches from the combat zone. This information is particularly important in regard to construction material and equipment in the assault and early echelons.

One very important sore point persisted throughout the whole year. Time
71,375 and again personnel would be shipped to the target without their essential equipment, particularly organizational equipment such as tents, galleys, etc. Time and again the fallacy of this was reported and always the answer would come back, "We know it is wrong and we will try not to do it, but sometimes it has to be done because shipping is so tight."

EXPERIENCE ON EVERY BASE IN EVERY THEATER OF WAR HAS CONCLUSIVELY
16,17 PROVED THAT IF MEN ARRIVE ON AN ADVANCED BASE WITHOUT SUFFICIENT EQUIPMENT TO HOUSE AND SUBSIST THEMSELVES THEY ARE A DRAIN ON THE BASE AT A CRITICAL TIME RATHER THAN AN ASSET. IT IS BETTER NOT TO SHIP THEM AT ALL THAN TO SHIP THEM "NAKED".

The author of this report pleads guilty to having from time to time either ordered that this be done after having been assured that by the time the men arrived the Base itself could support them. In other instances he reluctantly acquiesced in the plea that shipping shortages made no other course possible.

In almost every instance, the decision was wrong and the men suffered undue hardship and the progress of Base Development was retarded.

THE GENERAL PRUDENTIAL RULE OF ADVANCED BASE PLANNING IS, "IN THE FIRST SIX MONTHS AFTER THE ASSAULT ON A MAJOR TARGET NEVER SHIP PERSONNEL WITHOUT THEIR ORGANIZATION CAMP EQUIPMENT."

IV

MATERIAL

Special consideration in the choice of materials to be used at
31 advanced bases is mandatory because of the service it must render under the most adverse conditions. There are certain basic requirements
32,33 that all equipment must possess, namely: sturdiness, simplicity, and efficiency.

This equipment must also be as light in weight as possible, commensurate with the work it was designed to perform, because it must be transported great distances and man-handled to a great extent after it arrives at the site.

It must be sturdy to stand up under the rough handling incident to rail and water shipment and advanced base use, and to resist the high rate of corrosion due to the climatic conditions.

It must be simple and possess the minimum of controlling devices since the time available for training personnel is always short.

Any devices controlling the mechanical operation or erection of the equipment are potential sources of trouble and the elimination of each one contributed to the successful operation under the extreme conditions. All mechanical equipment must be efficient, since all fuel, likewise, must be transported over great distances.

The base must be erected in the minimum time in order to keep pace with the changing trends of the war, and, therefore, temporary structures must be resorted to in almost every instance. Typical of this basic concept were the prefabrication buildings called "Quonset Huts", for housing both personnel and material. In addition
37,34,49 to this type of structure to contribute to the temporary nature of the base, the maximum use of tarpaulins and tentage was made; particularly in the initial phases of the base establishment. In order to save critical shipping space, it was imperative that a maximum of local building material be utilized and our forces were most fortunate in locating ample quantities of coral which made

excellent material for the construction of roads and airfields. Saw mills were always sent along if there was the slightest possibility that suitable timber was available. In fact, the equipment of all units making up the organization of the base was closely inspected to reveal

43, 45, 47, 51, 52, 65

any possible shortage which would keep them from functioning at top efficiency and enable them to take advantage of every opportunity as it presented itself. The lack of a small tool or piece of equipment might create conditions all out of proportion to the normal value of this equipment if it were not at the right place at the right time.

59, 60, 68

The materials and equipment were ordered in functional component form, but each outfitting list was tailored to fit special conditions and to assure completeness. After the minute details of selection of type, quantity, and quality of materials had been decided upon, it remained only to get them to the site in the proper sequence and in the proper proportion so as to prevent the unnecessary handling and storing of cargo on an open beach. This was accomplished by formulating an echeloned shipping schedule for the loading out of ships so that first things would come off first.

It involved an inevitable split in larger units which added somewhat to the complexity of the situation by compelling the unit to develop progressively over a period of time. But whatever inconvenience it might cause any one integral part of the base was offset by the overall progress that was possible under this scheme. Very exact definitions of what to load in each echelon and how to load it were necessary, but this was all a part of the plan as it was drawn up by ComServPac and other type commanders.

35, 36, 38, 39, 40, 41, 42, 44, 46, 48, 50, 53, 54, 55, 56, 57, 58, 61, 62, 63, 64, 65, 66, 67.

The keen interest and enthusiasm of the Office of the Chief of Naval Operations and the Material Bureaus resulted in the availability of material in adequate quantity and excellent quality. If deficiencies occurred, they were usually due to omissions in planning which in turn were due to (a) Human frailty and (b) incomplete geographic and hydrographic intelligence.

Every effort should be made to standardize, as far as possible, in types of vehicles and construction equipment in order to reduce the quantity of spare parts required and to facilitate distribution.

While complete standardization would stifle competition and development, every effort should be made to standardize within Areas or Units.

No discussion of material is complete without re-emphasizing the trite statement that well trained and organized men with insufficient equipment can do better than poorly trained or poorly organized personnel with perfect equipment.

IV

MATERIAL - LOADING AND SHIPPING

74, 76, 77, 78, 79, 80, 82, 83, 84 Supervision of loading by the loading agencies was usually excellent. However, serious discrepancies occurred which could have been avoided had the officers of the Units moving forward always actually checked the loading of their own gear. This was done only at times and conflicting reports were received as to the reasons therefor.

It is believed that the following were contributing factors:

72 (a) The loading agencies were always pressed for time and did not want strangers asking questions.

69 (b) Very few officers in the Units moving out knew enough about loading problems or their own gear to cooperate intelligently.

71 (c) These officers were frequently concerned with their own personal problems of embarkation.

73 (d) They did not realize the importance of checking.

70 (e) There was some doubt on the West Coast as to whether or not these officers should be permitted to sight and to check the loading of their own cargo.

It is recommended that in all Advanced Base Movements a rear echelon of qualified personnel from each Lion Cub or GroPac be formed at the costal loading or at the Staging point and that the loading of all cargo be checked by an officer from their rear echelon.

There were three major developments in the Central Pacific that greatly facilitated the procurement, loading, and shipment of
75,81 large quantities of materials: The Type "A" Block, shipment, The BBB Load, and the Construction Materials Pool Ship.

THE NAVY STANDARD TYPE "A" BLOCK

Consumable supplies to keep a base going must be ordered long before a new base is even taken so that there will be a continuous flow of supplies to that base starting with the day of assault. In addition, units going in to a new base including the supply organizations are busy getting established in the early phases of the taking and construction of a base. Accordingly long before an assault ComServPac started placing orders for blocks of those items experience has proved are required to keep a base going. The "A" Block contains consumable supplies in the following categories: Clothing and Small Stores, Special Clothing, Ship's Store Stock, Housekeeping stores, Office Supplies and General Shop Supplies. Each block has approximately 450 items, occupies 85 measurement tons, and contains estimated consumables (in listed categories) for 1000 men for 30 days.

The "A" Block was developed originally in 1944 for the Gilberts operation by Captain H. W.Stover, SC, USNR, and Lt. (jg) R. W. Bilger, SC,USNR, both of the Advanced Base Section of ComServPac. It was utilized for all succeeding operations. At the conclusion of the period of automatic supply in the Marshalls, ComMarGilsArea conducted an extensive study of the usage experience

of "A" Block items and made recommendations to ComServPac as to changes. Following these recommendations, ComServPac modified the block accordingly. During the month of April, 1945, a further study was made of the "A" Block usage experience in the Marianas and Carolines. Based upon this study and information furnished by ComWesSeaFron as to availability of certain items, the "A" Block was again revised.

The "A" Block is designed for use during the automatic supply period which is generally the first 150 days of occupation. It must be emphasized that the "A" Block is not a complete stock of consumables in any of the six categories. It is not intended to equal the stock which a supply officer at a continental base or aboard a capital ship would be expected to maintain. The "A" Block does contain the items which experience has indicated are "necessary" to maintain a base until such time as requisitioning procedures can be set up. The "A" Blocks are the supplies considered necessary to maintain an installation, not set up an installation, and therefore are included in Maintenance Shipping. The consumables necessary for initial construction are supplied in the functional components are are shipped in what has been termed Garrison Shipping.

"A" Blocks were ordered by ComServPac from ComWesSeaFron who in turn placed the order with NSD Oakland where the blocks were assembled. The number of "A" Blocks ordered was based upon the estimated future Naval population furnished to ComServPac by CinCPOA. Each block supplies 1000 men for 30 days, thus when the estimated Naval population is 10,000 men, ten "A" Blocks were ordered for the 30 day period involved. If the supply period was only 10 days and the population was the same, then four "A" Blocks (or approximately 1/3 of 10) were ordered.

During the period of automatic supply, ComServPac ordered sufficient "A" Blocks to build up a stock reserve to the level prescribed in the Joint Staff Study for an operation; therefore,

parts of each maintenance shipment will be blocks intended to contribute to the build-up of this stock reserve.

All "A" Blocks except those delivered during the initial stages of an operation included the items in the quantities listed unless shortages or augmentations were specifically requested. In accordance with directives covering each operation, ship store stock was omitted during the period when personnel were supplied with gratuitous issues from Ration Accessory Packs. CinCPOA prohibited shipment of beer and soft drinks during initial stages in the establishment of a base.

Specific directives applicable to each operation indicated the duration of the automatic supply period and the deadline for submitting requisitions for stock to arrive when the period of automatic supply is terminated. Some bases found it convenient to requisition "A" Blocks or sections of "A" Blocks in lieu of itemized requisitions for block items after cessation of the automatic supply period. This practice was encouraged by ComServPac, as it expedited the assembling of supplies on the West Coast. Items not required were requested by a base to be deleted, and additional items needed were requisitioned.

BASIC BOXED BASE LOAD

The Basic Boxed Base Load (AKS-BBB Load) is a pre-assembled, bulk packaged unit load for overseas shipment to floating and shore based issuing activities. The original idea was conceived in 1941 by Commander Paul L. WEINTRAUB, SC, USN, Commander Richard HARRISON, SC, USNR, then supply officers of the USS POLLUX and USS CASTOR respectively, and Captain Frederic W. HESSER, SC, USN. From the inadequate but only ready source of information, the Normal Usage Data Tables, lists were developed of items to be carried aboard AKS's for issues directly to ships. These items formed what was known until 1944 as the Castor load.

Based on the Castor load and War Usage Data and to fill a need for uniform outfitting of advanced bases in order that ships' supply officers would know what items could be obtained from them and AKS vessels, the D-5 component was developed in 1944 by the Advanced Base Section and the Logistics Planning Division of the Bureau of Supplies and Accounts. Particular credit goes to Commodore Archie A. ANTRIM, SC, USN, Captain Hugh H. HAYNSWORTH, SC, USN, Lieutenant Commander C. E. TARBELL, SC,USNR, and Lieutenant Richard GEER, SC, USNR, for the development of the D-5 component, better known as the BBB load.

The BBB load consists of the following:

(a) General Stores - approximately 7,000 items, less compressed gases, in sufficient quantity and variety to provide common consumables for 40,000 men afloat for 90 days.

(b) Clothing and Small Stores - essential items in sufficient quantity to clothe 40,000 men afloat for 30 days.

(c) Ship's Store Stock - Ship's Store items, including barber, cobbler, fountain, laundry, and tailor supplies, in sufficient quantity to support 40,000 men afloat for 30 days.

The BBB load weighs approximately 2,500 short tons and occupies approximately 4,125 measurement tons. It requires approximately 30,000 square feet of storage space, 20,000 square feet of which must be covered.

The Bureau of Supplies and Accounts, and War Usage Collection Units under Commander Service Force, Pacific Fleet, and Commander Western Sea Frontier obtained basic war usage data through examination and analysis of ships' stock records. The Commander Service Force, Pacific Fleet, prescribed a representative force of ships to be used as the basis for compiling a list of the required items. This force of ships consisted of 2 CV's, 8 CVE's, 2 BB's, 2 CA's, 4 CL's, 1 AD,

1 AR, 1AS, 22 APA's and 10 AKA's. The quantities of the required items necessary to support the representative force of ships were determined by application of the basic war usage data. All quantities were then reduced proportionately to conform with the cargo capacity of an AKS. The Bureau of Supplies and Accounts established and now publishes and distributes the AKS-BBB load list. All revisions of items and quantities are made only upon approval and direction of Commander Service Force, Pacific Fleet. A new list is published every 6 months. Distribution is made among all forces afloat and supply activities ashore in the forward areas, as well as interested continental supply activities.

The AKS-BBB Load is used for:

(a) Balanced loading of AKS's. Compressed gases are furnished on an "as required" basis.

(b) Issues from AKS's to fleet units of GSK, SSS, and C&SS.

(c) It may also be used for initial stocking of advanced supply activities, and for rapid increase of stocks at advanced supply activities.

Field reports are the determining factor in scheduling loads for assembly at the various supply depots. After the number of loads required to fill the needs of the Fleet over a year's period has been estimated, these loads are assigned numbers and the depots are informed, depending on processing and storage capacities, which loads they will be responsible for assembling. It is necessary to notify the depots as far in advance as possible, so that procurement can be initiated and stock levels maintained. As many as possible of these loads are assigned to supply depots on the East Coast in order to relieve overtaxed West Coast facilities. The individual depots make every effort to assemble these loads as nearly complete as possible. The results of their efficient assembly-line techniques are readily apparent in the approximately 100 freight cars of boxes loaded, crated, and palletized--the completed BBB load. Each of

these loads has an estimated monetary value of slightly over one million dollars, exclusive of packing and transportation costs. Three of them can be fitted into a standard liberty ship.

As a result of the BBB load, advanced supply depots, even in their early stages, were stocked with the proper supplies, and general stores issue ships and supply barges are able to carry basic fleet requirements. Thousands of requisitions, therefore, from the many combat units of the Fleet did not and do not have to travel back to Pearl Harbor or the mainland to be filled.

Note: The ranks of officers mentioned above are those held by them as of 1 December 1945.

The Construction Materials Pool Ship was a special shipload of Construction material and equipment totaling about 9400 measured tons, loaded on the West Coast by the Bureau of Yards and Docks and shipped direct to the final destination where it was to set up a Construction Material Pool to be used at the discretion of the Commander Construction Troops.

This idea was originally proposed in 1942 by Commodore C. P. CONRAD, CEC, USNR, (then Lieutenant Commander), who was on duty in Bureau of Yards and Docks. It was to a limited degree in the building of South Pacific Bases.

When, after their occupation, the possibilities of the MARIANAS ISLANDS were fully appreciated, the original base development plans were greatly expanded. The immediate requirement was for basic construction materials.

The so-called DREW ships which had been originally intended for the European theater were diverted to the Pacific and were an invaluable asset in this MARIANAS expansion since they contained large quantities of basic Advanced Base Materials and supplies, chiefly in component form.

These shipments were supplemented by large quantities of cement, lumber, tents, buildings, nails, roofing, etc., loaded from Pearl Harbor

and the West Coast, and consigned to Commander Forward Area for distrib tion in the MARIANAS at his discretion.

These materials went to every activity in the MARIANAS -- B-29 Bases, Naval Bases and Naval Air Bases Military Government, Harbor and Waterfront and Road Development, Army and Marine Staging and Rehabilitation Centers-- and constituted a vital, immediate and major contribution to the sea and air offensive against Japan.

This emergency action was made possible by the intimate and understanding cooperation between Cincpoa Logistics Staff, the Service Force and the 14TH Naval District and West Coast Procurement and Shipping Agencies.

Thereafter, what had been a hurried improvisation in the MARIANAS Campaign became a basic principle in all subsequent plans. In the OKINAWA Echelon Schedule one or more standard Construction Materials Pool Ships loaded in accordance with Annex C were included in each echelon from the 9th to the 18th.

To a large degree, the RYUKYUS experience was similar to the MARIANAS. When OKINAWA was captured the original Base Development Plans were greatly expanded and urgent demands for Construction Materia and Equipment were received. The fact that the Construction Pool Ships were already scheduled was a life saver.

The sudden cessation of hostilities, of course, created tremendous confusion with attendant excesses of material and personnel. This does not alter the fact that the Operational Plans which made such demands on the OKINAWA bases could not have been carried out without the Construction Materials Ships.

V

PERSONNEL

An evaluation of the first nineteen Naval Base Units ordered to the Central Pacific shows the following characteristics on the part of the commanding officers.

It should be noted that in general the quality of the commanding officers and the training of units improved as time passed.

	General Ability	Physical Condition	Results Achieved
Excellent	9	12	5
Good	4		6
Fair	2	5	2
Poor	4	2	6
	19	19	19

A total of eight commanding officers were removed from command, either in the field or in the staging area. Five because of dissatisfaction with the work of their units and three because of poor health.

106, In the case of the six whose general ability was considered to be fair or poor, in each instance the deficiency was recognized in advance by the Service Force and the officer remained in command only because no better officer was available.

The above evaluation is considered very conservative. A rigid adherence to the standards we should maintain would have shown a greater number in the fair to poor classification.

168, In addition, many subordinate officers were removed from their assignments either at the staging point or in the forward area because of incompetence, physical reasons, or drunkenness.

A particularly difficult situation was created by drunkenness on the part of officers. It is understandable that commanding officers are reluctant to make official reports about drunken subordinates. In advanced Bases, particularly in the early stages, it is extremely difficult to conduct General Courts-Martial; the workload is tremen-

dous, witnesses are difficult if not impossible to assemble, and charges
141,142, 143,144, 145,146 151,152, 160. of drunkenness are frequently difficult to prove.

The result is that there is all too frequently a tolerance for and at times a "cover up" of officers who drink to excess. There-
166, fore, only the most aggravated cases are reported or come to the attention of Type Commanders in any manner other than "hearsay".

There were instances where officers who while still in the staging area established reputations for drunkenness among their associates and subordinates and yet went overseas with their units.

In the Forward Area the tension and strain aggravated not only their craving for liquor, but also the evil effects thereof, and serious trouble developed. These officers were removed and shipped back
153 to the United States, usually without disciplinary action being taken.

Of course, it is known that the Navy was woefully short of competent officers and we frequently just had to do the best we could with what we had.

Under no circumstances should officers who are known to be drunks be sent to an Advanced Base.

In some units morale was high, in others very low. There is no secret to morale; it is based on leadership, training, and discipline, and these are so interlocked that it is impossible to state where one leaves off and the other begins.

In many instances officers had no conception of their duty and no sense of responsibility toward their men. In those units morale
163,165 was low. In units where the leadership was of a very high order and where the welfare of enlisted men was a matter of personal concern to the commanding officer, the morale of officers and men was high in spite of adverse conditions.

103,104, 108,120, 140,149 If officers and men are not trained and disciplined, low morale is inevitable. This was of unusual importance in Advanced Bases in the

V

PERSONNEL

Pacific because in most cases bases were built in devasted areas

158,159, 161,162, 164,169 or in the jungle where combat, monotony, climate, overwork, tropical diseases, lack of recreation, sex deprivation, lack of fresh provisions all combined to test the morale of the finest outfits.

104,157, In many instances, morale was lowered by a long period of comparative idleness at Assembly Points and Staging Areas or by the inclusion in units of intractable delinquents. Some of this was unavoidable because plans were of necessity subject to sudden and radical change. Part could have been avoided by better and more accurate planning and follow-up by Type Commanders (including this office!) and part could have been reduced had ComWesSeaFrontier and the Commanding Officers of Training Depots been granted more freedom of action in shifting officers and men between units.

It was unfortunate that at times officers were gravely deficient in Leadership.

105,107, 167, An example was the statement in the "History, of a Gropac,_____, at_____", _____:

> "Working Parties were ordered to put up more practical bomb shelters and foxholes for officers while foregoing the opportunity of getting the same protection for themselves. This work was usually required after the men had performed a full day's work in their regular duties ... It was not surprising that the morale of the men was brought down considerably ..."

In contrast to this was the situation on TINIAN where in Gropac 6 the facilities for enlisted men were always completed prior to the 158,159 facilities for officers. This is especially important as regards recreational facilities.

This sort of Leadership can only be attained by careful selec-

tion followed by thorough training and indoctrination.

The type of Commanding Officer who immerses himself in paper work and never gets out of his office and his quarters will fail.

129, Of course, there is much important paper work to be done, but that must be delegated to the Executive or the Chief of Staff and the Commanding Officer must spend a large part of his time roaming his bailiwick. Then he will know whether his men are properly housed and fed, he will know who among his officers is bluffing and who is doing a job. You can't ring bells and buzzers and throw ammunciators from the Bridge of an Advanced Base. There is no duty in the Navy that makes greater demands upon the ability, character, and physique of an officer.

Under no circumstances should an officer be ordered to command an Advanced Base Unit entering the combat zone unless he has at least the same rank, experience, ability, character, and physical vigor which would be required of an officer commanding a combatant ship or group of combatant ships containing an equal number of officers and men.

The same principle applies all the way down the chain of command through the Chief of Staff, Executive and Department Heads.

85,86, 88, A study of the success or comparative failure of the various Advanced Base Units leads to the conclusion that here, more than anywhere else in the Navy the relationship of Commanding Officer to Staff, of Staff to Operating Personnel is important. Conditions encountered are so varied, the fatigues and frustrations so numerous,

87,89, 90,91, 94,100, 101,113, that liking and understanding and a sense of give and take are essential. Personnel must be imbued with a desire to help one another. If they are not the weaker or the unfortunate units will fail to function and the performance of the stronger ones will be correspondingly hampered. The choice of personnel with these qualifications

92,95, 96,97, 98,99, has been no less important than the adequate training and equipping of personnel.

In case of future emergency requiring the establishment of Advanced Bases, it will be important to have experienced personnel. Therefore, steps should be taken to indicate this experience on the qualification records of officers and men in order that they may be quickly selected and assigned.

PERSONNEL TRAINING

There were many deficiencies in the training of Advanced Base Units, but toward the spring of 1945 a definite improvement was noted.

It appears that the following factors caused deficiencies:

117,118, (a) Lack of familiarity with the problems of Advanced Bases. This was particularly true in 1942-43.

(b) Lack of Centralized Control of Training Activities.

CNO had direct responsibility for ABPD, San Bruno.

Acorn Tradet, Hueneme, went from CNO to Amphibious Forces.

SeaBee Training was under BuDocks.

ABPA, Iroquois Point, was under ComServPac.

Communication Units were trained at ABPA Iroquois Point under ComServPac and at Class "A" Schools under BuPers.

125 (c) Shortage of competent and experienced officers to conduct and supervise training.

(d) Uncertainty as to when units in training would actually depart.

This made it extremely difficult to schedule training activities. Some units had a very

short time available between assembly and sailing, and others completed training and then waited for many months without being shipped. This was sometimes due to unavoidable changes in plans.

123, (e) Shortage of personnel and lack of flow of personnel. This resulted in delays in assembly of units which in some cases obtained their full complement only a few days prior to sailing.

(f) Failure to establish thorough screening programs early enough. Many experienced men were lost; many unfits were sent out.

102, (g) Failure to recognize all of the technical skills that would be required.

It is considered that the curricula and scheduling of units as finally established in 1945 were in general satisfactory and if the demands of the Forward Area could have been made known in time, well trained units would have been produced.

124,126, The nature of Advanced Base work is such that it makes very great demands on the ability and physical endurance of officers and men. The 131, early echelons are under fire for considerable periods. An Advanced Base in the early stages is always extremely confused and officers and men must work 18 to 20 hours a day for weeks on end, living in pup tents and foxholes, eating K and C rations. Cargo handling must be kept going 24 hours a day.

122,132, One of the most serious difficulties encountered in Pacific Advanced Bases was the lack of any conception as to sanitation and rough camp life on the part of officers and men who had not had intensive training and experience.

An extremely important factor to be considered is that the Construction Battalions, by reason of their size, organization, and equip-

ment, are best fitted to do the major jobs of construction, such as airfields, roads, waterfront improvement, and major area clearance and construction. If this potentiality be dissipated by initially
127, utilizing Construction Battalions for construction of camps, small supply dumps, and buildings, the Combat Construction will suffer. Furthermore, because of this, the Garrison Force Commander will, regardless of any organizational directive, concentrate all Construction Forces on roads and airfields. This is entirely proper, but it must be recognized.

110,116 EACH ADVANCED BASE UNIT MUST BE ABLE TO LAND, SET UP A SATIS-
133,147
149,150 FACTORY CAMP WITH COMPLETE SANITARY FACILITIES, BUILD AND OPERATE
152,154
155,156 ITS OWN SUPPLY AREA, AND PROVIDE AND MAINTAIN ITS OWN TRANSPORTATION
160
AND SECURITY WITHOUT HELP FROM ANY OTHER ORGANIZATION.

111,114 The obvious conclusion is that all Naval Advanced Base Units
119,121
126,127 accompanying an assault must have both the training and equipment to
130,135
136,137 do minor construction. The units should include personnel who have
138
had training and experience in the following:

Erection of Quonset Huts, both 20x56 and 40x100.

Erection of Galley.

Simple bulldozer operation to clear camp and dump areas and build temporary minor interior roads.

Light crane operation.

Fork Lift operation.

Minor waterfront improvement.

Operation of small shovel.

Mixing and Pouring Concrete.

109, No amount of study and instruction can take the place of actual experience in the field. Before the component function can be discharged, the men must be able to live.

116 Until an outfit has actually spent a week or more in camp under

field conditions, it is only an aggregation of various ratings. It is there that the qualities of leadership of officers and petty officers is first tested, and it is there that the real organization is achieved.

FIRE FIGHTING

306 to 316 The importance of Fire Protection and Fire Fighting should be stressed in all Advanced Base Training. In most bases the initial establishment is of necessity concentrated during the period in which enemy counter-action is most probable. The presence of large quantities of explosives makes any fire on an advanced base a serious matter.

The Regulations for Fire Protection of Advanced Bases (Land Base Activities) issued by CNO in August 1944, and prepared by BuDocks, BuShips, BuAer, and BuOrd is a valuable guide for a base or island Fire Marshall.

Annex D gives the course of instruction finally developed at 115,134, the Advanced Base Personnel Administration at Iroquois Point, Pearl Harbor, and it is recommended that this be carefully studied prior to the final determination of Training Policy.

This subject is also discussed under "ORGANIZATION" and "FUTURE PLANNING".

It is recommended that, regardless of the final decision as to type and extent of Advanced Base Training, it be under the general supervision of the Bureau of Personnel in the Post War Navy.

Unless this be done it will be difficult to obtain the overall coordination necessary. Furthermore the training can easily revert to a "step-child" status.

1. The Advanced Base Sanitation and Bivouac Course of Instruction should be incorporated in the basic training of all officers and men of the Navy.

2. Ships of the fleet should put their landing force ashore for at least one week each year in a location which will as closely as possible simulate advanced base conditions.

OUTLINE OF SUPPLEMENTARY RECOMMENDATIONS FOR TRAINING AND PERSONNEL

The points listed below are outlined, not as a comprehensive or complete program of training or of personnel planning, but rather as additional factors to those already set forth previously. Some of them are statements of fact, while others might be regarded as opinions and individual observations. The categories into which they have been separated are not clearly defined divisions. Some are over-lapping and all are not of equal value or importance. It merely simplifies discussion if some kind of classification is introduced. The training and personnel problems are being discussed together since it is difficult to draw a clear cut line of demarkation. Both belong in the same department at the planning level, particularly.

I - TACTICAL.

A. General Aspects.

1. A Successful tactical training program must be developed around clear-cut objectives...The personnel responsible for providing this training must keep these objectives in mind and never lose sight of the fact that it is the attainment of these objectives that is their "raison d'etre."

2. A successful tactical training program must be more or less standardized for all units in training, but on the other hand must be flexible and capable of tailoring the training to meet the needs of the individual units being trained. I would emphasize here again that the training activity exists to serve the needs of the units being trained and it must not lose sight of this fact.

3. To the greatest extent possible, personnel of a given unit should be assembled for training at approximately the same time.

Time-lag and stragglers leave gaps in the over-all preparation of a unit.

4. The tactical training of a unit should be effected as nearly as possible to the time the unit will shove off for its destination. This kind of training can be forgotten, carelessness develops and morale suffers when a unit undergoes a prolonged waiting period between the time it completes its over-all training and the time it arrives at its target. It is very difficult to keep it at a high peak of efficiency and enthusiasm.

5. Tactical training should not be considered complete when a unit leaves the training center. Some in-service training can be carried out even after the base has been established to keep the personnel on their toes. Considerable training can also be carried out aboard ship enroute to destination. Values of this latter procedure are obvious.

B - Special Aspects.

1. Bivouac.

a.-The bivouac must be as realistic as possible. The bivouac area should be an undeveloped area which simulates actual conditions as much as possible. It is highly desirable that the facilities be completely developed by the unit on the bivouac, and setting up the camp should progress from establishing a temporary camp to building a semi-permanent one. Many valuable lessons are lost if, for the sake of convenience, the training activity attempts short-cuts by having camp facilities established before the unit arrives.

b - The bivouac must be organized and planned in advance. This should be done primarily by the personnel of the unit being trained with consultation of the training officers. The training officers must not do the thinking for the personnel being trained.

c - Upon completion of bivouac a "post-mortem" should be held. Where desirable, all hands should be in on it. The bivouac period should have given the commanding officer and his staff an opportunity to observe the men, make an appraisal of them as to their leadership qualities and special abilities; and it provides an opportunity for them to iron out the weak spots and weld the organization into a smoother functioning activity.

2. Other

All hands will receive some training in such subjects as sanitation, but special squads should be selected for more intensive training in these various subjects.

C - Semi-Technical Aspects of Tactical Training.

1. Experience has proved that personnel must of necessity be versatile and must have some proficiency in other technical fields from that in which they were specifically trained when they were made up into components. For example, knowledge of quonset hut construction, truck operation, small boat operation, bull dozer and crane operation is desirable for some of the personnel. Also some training should be given in mechanical maintenance since much of this will have to be done in the early stages by the operating personnel themselves.

2. Pre-fabrication of gear and knowledge of how to assemble it is important, and the utilization of local resources, whatever they may be, is important.

II - TECHNICAL

A-Communications.

Communications personnel, particularly those of "C" Components, received their basic training generally in Class "A" schools under BuPers. Such training in general was satisfactory; however, it was found that serious deficiencies resulted in the loss of individual

skills among communication personnel from numerous transfers between various training activities. This drop in efficiency was aggravated because of the time consumed in tactical training. This situation may be obviated by the establishment in each principal area of a communication training center located near the staging location, where training and preliminary organization of the communication personnel may be centered. Communication personnel must be available at strategic locations for transfer to staging areas as needs arise. Communications officers were, in general, well prepared in basic communications, but were deficient in the basic qualifications for handling men and the administration of personnel. Future training for communication officers would include indoctrination in the handling of men and allied subjects.

B-Port Director.

1. It is recommended that the detail officers or officer responsible for organizing port director teams have first hand knowledge of port director organizations. This does not mean that he has to be a port director man himself, but rather that he should have had an opportunity to study a port director organization as it functions in order that he will understand the problems encountered and the routine involved.

2. The practice of placing port director school graduates in Mainland port director organizations is desirable. Also it is recommended that inexperienced port director officers continue to be placed in training and for further assignment in the port director offices of established bases in the forward area.

3. Replacing experienced officers in these established advanced base organizations with inexperienced officers and using the experienced officers in port director units for new operations to the greatest extent possible is worthy of consideration.

Where there is necessarily a time lapse between the period of post-tactical training and the target date, provision should be made for continued training in the technical field around which a component has been developed. This is particularly true of communications.

III - GENERAL TRAINING PROBLEMS

A - To have a smooth-functioning organization it is necessary to co-ordinate and integrate tactical and technical training to the greatest extent possible. These are not mutually exclusive. Both are important and necessary to properly round out the training of an advanced base organization.

B - Adequate training is important for more than its immediate objectives because it gives the individual greater self-confidence, because it commands respect of others, raises morale, and most important of all it gets the job done as it should be done.

C - Training welds the organization into a unified whole, giving individuals and components a realization of how and where they fit into the over-all organization.

D - The practice of returning experienced officers from forward areas to training activities on temporary duty to give the benefits of their experiences should be continued.

E - All advanced base training should come under one over-all command.

F - There is a great deal of paper work at any command, and establishing an advanced base is a full time job, but submission of reports from the commanding officer of the newly established advanced base on the adequacy of training, material, special problems, unique problems encountered, etc., is desirable and should be encouraged.

G - Some of the training officers at training activities should have had advanced base experience. In some cases, where officers are technically competent in the theoretical aspects of training but lack the experience, it would be desirable to send them on an operation to

gain first hand experience. Also, the type command training officer, responsible for planning aspects, should visit the advanced bases from time to time to gather information and to check on adequacy of training.

III STAFF OR WAR COLLEGE TRAINING COURSE AND INDOCTRINATION OF COMMANDING OFFICERS.

A - It is recommended that a staff course be established for prospective commanding officers and executive officers. This has been a rather glaring deficiency of advanced base operations in the past. A few suggestions regarding content follow:

1. Study of over-all organization of advanced Bases.

2. Study of problems of planning and advanced base operation and actually planning a hypothetical operation - including the details.

3. Study of problems that can be anticipated in carrying out an operation - problems of supply, camp lay-out and construction, road-building, defensive measures, sanitation, echeloning schedules, cargo-unloading, etc.

B - Once the officer becomes affiliated with a particular operation, he will then be able to plan more intelligently. But there are additional features to consider, which come after completion of the staff course, before his indoctrination is completed. Among these are:

1. Participation in the planning of his operation.

2. Visit to forward area bases.

3. Study and consideration of minor details - "trivia" which will have been compiled for informational purposes and based upon experiences in previous operations. Such matters as are discussed in the memo attached here (see annex E) which cover the interview with Lieutenant KELSO are examples.

4. Study of Navy directives and other matters assembled in a

prospective commanding officer's file.

C - Commanding officers of advanced bases must be capable, efficient officers. They must be as carefully selected as other commanding officers. Also, the early days of an operation are the most important ones. It is then that the most capable officer is needed.

VI

FUNCTIONAL COMPONENTS

During the early stages of the war, when operations were being conducted primarily in the European and African theaters, the necessary manpower and material to establish an advanced base was compiled into one large allowance list in much the same fashion as a contractor would accumulate a bill of materials for a continental project. These lists of personnel and material were the fruits of many hours of concentrated thought of many individuals, and were correlated by one project manager into one voluminous master cargo list.

This procedure was long and tedious and much duplication of effort was expended to arrive at an intelligent coverage of all elements of the requirements without unnecessary duplications occurring. The so-called project manager was charged with the responsibility of assuring complete and adequate coverage in a multiplicity of fields and little or no improvement in this process was made from one project to the next.

Procurement of materials, with long lead time in manufacture under this scheme, was very difficult as was the training of personnel with the result that the assembly of both was always in a confused state just prior to embarkation time.

Out of the experiences gained in this rather awkard set-up, it was conceived that all advanced base missions would integrate themselves into a certain category of functions and that functional component allowance lists of varying magnitude could be compiled. These allowance lists were far from adequate in the beginning and have been revised and re-revised as experience and conditions in the field dictated. The lists, however, did provide a means of logically predicting future requirements of personnel and material and eliminated, to a large degree, the possibility of overlooking the minor detail that often spelled the difference between success and failure as far as the function was concerned.

In short, these components permitted an orderly assembly, well in advance of embarkation time, of men and materials to perform a particular function on an advanced base.

With such a system established, a catalog of complete functional allowances could be published and this was found of immeasurable assistance to the people in the field for specifying requirements. It was possible to order in brief dispatch form, the selected size and kind of functional components for an advanced base and expect them to arrive complete with trained personnel and adequate material. It was realized that perfect standardization of components and the materials comprising them would not always meet the exact requirements of every base, but the advantage gained from the standpoint of procurement, training, assembly, and shipment of the components vastly offset the time-consuming and tedious task of compiling a voluminous itemized allowance list as was formerly done, and, even then not have any assurance that all the items would be at dockside in time to be loaded out. While the functional component system was basically sound it was found from actual field experience that it was sometimes necessary to tailor the elements upward and downward to fit the special requirements of the individual bases. This was the case, particularly, with very large units which exceeded the largest basic catalogue component.

This tailoring was, however, much easier than starting from scratch in compiling a proper allowance list and while there are those who probably adhere to the theory that it would have been better to take all or none, it is not conceded that the purpose of the functional component was defeated by the required tailoring. While it may have resulted in more effort for continental activities it was of immeasurable assistance in the field - the place where it was needed.

The standard component provided that nucleus upon which to build the required allowance and since every base is different from every other base a certain amount of tailoring would always be required

no matter how well the sizes of the components were integrated.

This apparent lack of flexibility in the components is not a criticism of the system, but rather, a point in its favor since most any combination could readily be made without sacrificing the basic advantages of procurement, assembly, and shipment. The alterations to the components were, of course, a problem, but, as is always the case, actual performance in the field which is dictated by experience is the primary concern and paper work and records must follow.

The end result under the component system was quite satisfactory, as is borne out by the rapidity with which orders were placed and complete shipments were made. Each completed operation revealed deficiencies in the work of the planning agencies and functions for which there were no established components, and,in these cases, allowance lists were compiled by the planners as the occasion demanded and the personnel and material for these had to be procured from all available sources on very short notice, but in most cases this was done with admirable speed and efficiency by the material bureaus and their field activities.

It is recognized that it is difficult to set up procurement machinery and training programs in war time without the possibility of upsetting other schedules of relative importance and it is believed the component system functioned as well as, and possibly better than many other wartime expedients. Improvements could possibly have been made if changes in allowance lists could have been made more rapidly as trends in the field indicated and new component allowance list compiled, published, and distributed more expeditiously.

The list of functions could very aptly have been expanded and certain basic dificiencies in the existing ones corrected. It is not advisable to publish a summary of a component before a detailed allowance list has been compiled, as was attempted in a number of cases. This situation compels the forces in the field to order some-

thing blindly or compile their own allowances and process a request which will probably be long in execution.

Closer liaison between forces afield and procurement and approval agencies would have been profitable to everyone concerned.

One disadvantage of the Component System which developed in the
170 field was that officers and men sometimes developed too great a degree of "Component Loyalty" and this had a tendency to obscure their
209,211, 213 consciousness of the mission and problems of the Base and the Service as a whole. This can be avoided if the officers of the Training establishment and of the Staff of the prospective Base are aware of it and take proper measures to indoctrinate officers and men in an interest in and loyalty to the base as a whole.

It is not desired to review all components in this report. It is important that the Bureaus keep up to date in the requirements of individual components and that is an extensive and continuing project. However, the importance of transportation on Naval Bases warrants specific action.

210,212 While components frequently are provided with some motor transport, a base of any size requires a large amount of motor transport. In the last few operations Truck Operating Battalions and Motor Pools were set up. These were not wholly satisfactory and it is recommended that CNO study this problem with a view to providing Motor Transport Components of 50 to 100 trucks each, to include:

Two drivers per truck.

Administrative, Supervisory, and Housekeeping Personnel

Repair and Maintenance Personnel and Equipment.

VII

OPERATIONAL ORGANIZATION

COMMAND RELATIONS

An examination of the many combined or amphibious operations that took place in the Pacific Ocean Area leads to the conclusion that the major difficulties of military operations involving more than one armed service were successfully eliminated. There were no failures in operations due to misunderstandings as to spheres of responsibility or irreconcilable differences between the forces.

Much of this improvement in the conduct of Joint Operations is to be credited to the unification of command, not only in the higher echelons, but on the tactical level and in Base Development.

The record, however, is not without its blemishes. There were cases in which much needed projects were not completed on schedule and organizations of the various services on the lower levels of command
185,186 sometimes worked at cross purposes to one another.

In some instances friction developed between elements of the Army
181 and Navy Garrison Forces within branches of the same Service on Advanced Bases during the early days on an occupation.

182 In practically all cases the difficulties were overcome locally in
184
183 a satisfactory manner. However, sometimes the progress of Base Development was retarded.

In the wholesome desire to minimize the results of this difficulty, Unit and Base Commanders made very little mention of it in official correspondence. Personal letters and personal discussions with officers from both Services have thrown much light on the subject. It is considered that it was due primarily to the causes listed below, most of which are subject to correction:

(a) Lack of time for planning.

For the establishment of a major advanced base in connection with an amphibious assault at least ninety days prior to mounting date, the major Staffs should be completely assembled and in operation. With an allowance of thirty days between mounting and assault dates, and allowing one month for the issuance and distribution of orders and a month for assembly this means that the Commanders of the Garrison Forces and Units involved in the operation should be selected six months before D Day.

205,206

While this may be considered a Utopian Concept, we should recognize that the understanding team work necessary to a smooth operation cannot be obtained in a shorter period.

178,179, 180,181, 182,183, & 187

(b) Lack of understanding of the problems and responsibilities of the other Service.

This can be overcome only through experience and education While the Army Navy Staff College is a step in the right direction, it is considered that joint education should be extended and that we should make every effort to establish a procedure whereby naval officers could have field service with the Army and Army Officers sea service with the Fleet.

177

(c) Lack of understanding of the organization and regulations of the other Service.

Comment same as under paragraph (b).

(d) Difference in standard of living between the Services.

Due to the high mobility required of Army units, their field ranges do not produce the same quality of food as the ranges used in the Navy. Furthermore, officers and men of the Navy are accustomed to living aboard ship where the supply of fresh and frozen food is frequently superior to the Army

field rations. In addition, senior officers of the Navy are accustomed to excellent quarters aboard ship and frequently

208 insisted on a high degree of comfort on Advanced Bases.

(e) Intense desire of individuals to carry out their own responsibilities in the best possible manner.

Unless Units have pride in their work and in their camps, they will not have the morale to do a fine job in the field. This same pride and drive induces them to strive for desirable locations and compete for equipment.

(f) Intense competition for desirable real estate.

Comment same as under paragraph (e).

(g) Poor selection of officers.

Advanced Base work is of such exacting nature that only the best quality of officers should be assigned to it. They must have unquestioned professional ability, and character and they must be in physical condition to stand up under adverse living conditions.

187 Nothing is more conducive to inter-service friction than for an Army Island Commander to find that the naval officers of the Units under his command do not know their jobs.

(h) Improper training.

Comment same as under paragraph (g).

(i) Raw nerves brought on by overwork under combat conditions.

(j) Human "cussedness".

These factors must be accepted.

(k) The nature of the problem.

Quick arbitrary decisions had to be made and plans radically changed because no amount of reconnaissance photos and charts can be a substitute for actual field observation.

(1) Tendencies on the part of the staffs to become involved in minor matters of unit administration.

A few out of the many problems that arose are mentioned below by way of illustration. The solutions which were most satisfactory, all seem to emphasize, if emphasis is necessary, the impracticability of administering all of the detailed workings of a large organization from the top echelon. The lower echelons must be trained in an understanding of the policies of the senior command and enough rank must be given and authority delegated to the lower echelons so they may operate within the limits of those policies without constant reference to higher authority.

190, 172,173, 176,191, 196, 192,207, 184,188, 189,

In the Central Pacific it was the policy to centralize all construction under the Commander Construction Troops who in turn was responsible to the Island Commander for all construction on the target. While this policy had many great advantages, it had certain disadvantages

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The great advantage was that it gave to the Island Commander immediate and positive control over the most urgent combat construction. In each instance this consisted of building roads and airfields. The Construction Battalions were designed and organized to do this major work in the most efficient manner. Experience in the early days of the war indicated that when the Battalion Organization was broken up in any way to provide for the rapid construction of less important facilities, the major construction effort was seriously hampered. As the size of our targets increased, it became necessary to form Brigades and in the OKINAWA Operation the Commander Construction Troops had under his immediate command a total of 42 Naval Construction Battalions formed into 3 Brigades and 9 Army Engineer Battalions, providing a total of about 65,000 Construction Troops. This necessitated the formation of a large construction staff.

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In dealing with a large island under the combat and weather conditions normally communication between Battalions and from the Commander

Construction Troops to individual Brigades and Battalions is difficult. Insofar as the Naval Base was concerned, the complete centralization of
193, construction authority under Commander Construction Troops involved in many instances a considerable delay in the accomplishment of many tasks which while small in magnitude were large in importance. Furthermore all Commanding Officers and their staffs are burdened with the large amount of detailed paper work required.

195 A fundamental of military command is that the officer charged with the accomplishment of a mission must be given the means with which to carry out the mission. As is indicated in Chapter One, the Fleet always has and always will look to the Commander Naval Base for Fleet support. The officers of the Fleet do not hold the Island Commander or the Commander Construction Troops responsible for any failure in Fleet support. The Commander Naval Base should not be expected to meet the demands of the Fleet if he is not given the means to accomplish this task.

Another defect in the total centralization of construction effort is that material which is shipped and landed for the construction of
174, a Naval Base in accordance with a schedule previously approved by
126,127, Commander Construction Troops will often lie idle and be subject to deterioration, pilferage, and diversion when it is found that the construction schedule cannot be met by the Commander Construction Troops and Commander Naval Base has no construction forces available to him.

While there is no doubt that a high degree of centralization of construction authority in one command is necessary for the proper accomplishment of large-scale operations, the question arises as to whether that should be 100 percent centralization or whether it should be modified to permit other organizations to handle their own immediate and essential requirements.

One possible solution is to attach small construction detachments to each major unit in order that the camps and local essential facilities may be quickly erected by each organization without reference to the major staff. While this solution would facilitate the construction of local facilities, it has the disadvantage of breaking down the efficiency of the Construction Battalions from which these detachments are withdrawn.

The second possible solution lies in bringing in Construction Battalion Maintenance Units with the early echelons of the Naval Base and the Naval Air Base. This system has certain advantages and was the policy used by ComAirPac in the establishment of some Naval Air Bases. This was recommended for Naval Bases, but it was not put into full effect because in many instances the Commander of the Construction Battalion Maintenance Unit was ordered to report to Commander Construction Troops and it was not until long after the arrival of the Maintenance Units that they became available to the Commander Naval Base for operational control.

The third and preferred solution lies in the adoption of the scheme for formation of an Advanced Naval Base Establishment Force as outlined in the chapter under "recommendations" and in the training of all Naval Advanced Base personnel in the operation of simple construction equipment and in the performance of simple construction tasks, as outlined under Personnel Training.

Annex F, which gives a suggested composition by Major Units for this Naval Base Establishment Force, provides a limited amount of construction equipment.

In the Central Pacific a differentation was made both in planning and in administration between Naval Air Bases and Naval Bases. While Cincpoa coordinated the two, the details of Naval Air Bases were prepared by ComAirPac and those of Naval Bases by ComServPac. However, after the bases were established, the supply of all material other than that purely

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aviation, was the responsibility of the Service Force.

The organization at the target frequently was such that an Army or Marine General commanded a Naval Base, a Naval Air Base, Naval Hospit and Naval Construction Troops.

While this was the initial organization at Okinawa it was changed after the occupation to provide a Rear Admiral, Commandant of the Naval Operating Base which included all the above activities. This latter organization is considered preferable since it provides a better integration and administration of Naval matters.

The manner in which NSD Guam was organized and functioned and the operation of the Fleet Service Office NOB Guam combined to make an outstanding contribution to Fleet Support. The spontaneous and enthusiastic comments of many Commanding Officers were to the effect that cooperation and efficiency had been outstanding. The Organization Manual Naval Supply Depot Guam M.I., Fleet Service Manual Naval Operatin Base (Guam M.I.) and Annex G which contains proposals for a further development of a Fleet Service Office, merit careful study not only with reference to future operations and to Advanced Bases but as a means of improving the operation of our continental Bases.

VIII

SPECIAL PROBLEMS

VIII A CONSTRUCTION

Although it is not the province of this report to discuss the problems of Construction Troops in detail certain Construction considerations which were present in all movements directly affected other Garrison Units.

Detailed Advanced Planning of building layouts, grading plans, road nets, and the like proved invaluable. The Service Force encouraged
337 the officers of the units staging through Pearl to make these in
338 collaboration with their own Construction officers or with the assistance of the Advanced Base Sections Construction Unit. Many of the units were discouraged upon arrival at the target to find that unforeseen considerations prevented the use of their plans. However, the educational value, knowledge of material and the personal relationship generated between key personnel in the services were such that it is strongly recommended it be continued.

337,339, Operations proved that, no officer or man should be detailed
346,348, to Advanced Base duty without a knowledge of the rudiments of con-
349,352 struction. Although originally it was intended that construction
343,344, troops should perform all construction work it was found by ex-
347 perience that the urgency of combat construction was too great to permit the utilization of many construction troops for the construction of the camps and other facilities that were essential to the
341 early operation of the Naval Base Units. Under C.B. supervision other personnel built camps, laid out dumps and access roads, and performed
342 very creditably in doing so. Further training would improve that performance and is desirably when the high priorities that must be assigned to the construction of harbor facilities, communications, airstrips, and roads are considered.

345,350, It was natural that maintenance of Base facilities sometimes
351 should have made a poor showing as compared with construction. Installation of bases was the exciting task and the one in which the

principal effort was concentrated. A study, however, of the results of base operation down to the present leads to the conclusion that the field maintenance deserves, greater emphasis and would pay considerable rewards.

In the Okinawa Operation extensive use was made of pontoon assembly ships and Pontoon Tows.

The Service Force has not received sufficient information as to the relative success of these pontoon operations to make specific recommendations for the future. It is expected that the Chief of the Bureau of Yards and Docks will cover this fully in his reports.

VIII B SANITATION AND MEDICAL

The Medical and Hospital Units as prepared by the Bureau of Medicine and Surgery were ample in quantity and superior in quality. This was evidenced by the high standards of the hospitals and dispensaries built on the Advanced Bases.

However, from time to time, officers of the Medical Corps of all ranks would arrive at Pearl Harbor for staging to the forward area who had no conception of the problems which they would encounter in the field.

267 In each case they were given intensive indoctrination at the Advanced Base Personnel Administration at Iroquois Point, and while this was frequently very hurried it served a valuable purpose.

266,268 A knowledge of advanced base sanitation is a fundamental requirement for all officers and men going forward. Illustrative of its importance is the instance of one island where with a military pop-

263,264 ulation of about 65,000, immediately after its capture, the sick rate was about 16%. The greatest portion of this sickness was caused by

265,270, 276,277 flies, mosquitoes and contaminated water supplies. Intensive measures brought about a reduction to about six percent within one month. These measures included prompt diagnosis and treatment at dispensaries located with the isolated units as well as increased emphasis on effectiveness of the island sanitation control program.

In other words about 6500 men were restored to productive work.

However, 6500 extra sick men for one month means that about an additional 1000 men must care for them making a total of 7500 men, who for one month, have accomplished no productive work and at the rate of 1.5 tons of subsistence per man per month it means that about 11,000 measured tons of shipping space and unloading capacity were wasted. Although much can be accomplished by the observation of simple rules of hygiene, the early echeloning and careful planning for streamlined medical facilities has paid dividends.

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While intensive combat always leaves a situation productive of disease, experience has shown that under the worst conditions an outfit which has been properly equipped and thoroughly indoctrinated can maintain a low sick rate. That is, under ten percent, while organizations which have not recognized the urgency of sanitation can, under identical conditions and frequently in adjacent areas, expect a sick

269 rate of between 25 and 50 percent.

The studies made by Captain R. W. BABIONE, MC, USN, based on his inspections of the forward area furnished an invaluable guide to all Advanced Base Commanding and Medical Officers and resulted in a great improvement in sanitation training, and a consequent marked improvement in the health and efficiency of personnel in later operations.

Captain BABIONE supervised the Sanitation Training Program at the Advanced Base Personnel Administration at Iroquois Point. The training pamphlet THE SICKTH COLUMN prepared under his guidance has been a valuable training aid. His reports and recommendations are on file in the Bureau of Medicine and Surgery.

VIII C COMMUNICATIONS

In general, Communication Components, both in scope of utility value and material design were practical. Due to differences in size and mission of bases, components were necessarily adjusted as to size, thereby permitting operation to take place as required. Minor adjustments in size were all that were usually required. Constant advancement in the art and changing concepts of the communication doctrine

attendant upon such advancement will generally dictate the types of equipment for future use. At the present time, functional C Components are considered satisfactory.

Mobile communication equipment, large transmitters, not included in C Component materials, and communication equipment for special purposes, such as field sets, very high and ultra high frequency transmitters, were procured generally through the Electronic Pool System. Such procurement was generally satisfactory, largely because the requirements for such equipment were made known in advance and was available in most cases when needed.

Advanced base requirements were made known to the Pool Procurement Officer, through the Advanced Base Section, and all shipping to the Staging Area was arranged by the Pool Personnel.

Suggestions for the formation of Mobile Communication Components were generally considered impracticable due to the varying needs of each operation. It was found most advantageous to assemble the required types of equipment at the Staging Center and to organize the personnel in accordance with the mission of the base to be occupied.

The design of mobile equipment was generally done by the Bureau of Ships, and was in accordance with the requirements of the Area.

Where Communication Units were to be formed, the practice of shipping C Components to a staging area provided a practical method for assembly of personnel and material. Complete checking and testing of equipment, to determine shortages and damages, were found to be a necessity in order to insure proper operation of the communication facilities at the earliest moment. Such assembly at the staging area necessarily requires adequate facilities for inspection and tests of the equipment prior to embarkation.

The necessity for thorough training of communication personnel in the specialized equipment of the C Components is particularly important.

The problems of Advanced Base Communications appear to have centered around the distribution of information within the Base itself

and the relationship of the Units leaning most heavily upon the use of the Communications Facilities to the Joint Communications Center and the general island net work.

Much can be, and was done, to correct the deficiencies by formalizing procedure, improvising tactical circuits, placing communications liaison personnel in activities such as the Port Director, Naval Supply Depot, Ship Repair Unit, and Advanced Base Construction Depot, and creating direct circuits between organizations that had to be in touch with one another frequently. Training of the Communications Units at the Forward Staging Center also proved beneficial.

In general, equipment selection and performance, despite its delicate nature, was excellent, and the work done by visual communications in avoiding congestion on voice or mechanical circuits capably performed.

VIII D PORT DIRECTOR

The problems of Port Director and Shipping Control were brought to the fore in the Marshall Islands Operation when the absence of a clear-cut definition of the duties and authority of the Port Director caused a great deal of confusion and inefficiency in the handling of shipping.

Being a logistics war with everything dependent on shipping, availability, loading and scheduling - inefficiency reflected immediately in excess communication; uncertainty as to location and movements of ships and location of cargo; difficulty in delivering ammunition and supplies to the Fleet; excess turn-around time; inability for Atoll Commanders to plan unloading; tie-up of Fleet freight; waste of time, material, and personnel with inevitable bad effect on morale of officers and men.

Confusion in terminology existed in that Port Director, Assistant Port Director, Harbor Master, Port Captain, Captain of the Port, and Marine Superintendent were at times all used as titles for officers performing the same duty.

The major officers and agencies who were concerned with this problem were:

Cincpac-Poa	Com5thFlt	ComPhibsPac
ComFwdArea	ComSeronTEN	Senior Off. Present Afloat
Convoy Commodores	Atoll Commander	Island Commander
Naval Base Commander	ComServPac	Dir. of Naval Transportation
Army Transport Service	The War Shipping Administration.	

Among the problems which required clear definition of authority and coordination were:

215,217, 218,219, 220,221, 227,229, 232,233 Convoy, routing and escort, Reporting, Berthing, Communications, Cargo manifests and reports, Unloading of cargo, and Operation of boats and lighters.

Other factors as indicated below further complicated the problem. The Naval Base Commanders, as a rule had an insufficient knowledge of the problem and the IslandCommanders, some of whom were Army Officers, were in a similar situation. In many instances there was confusion in the allocation responsibility for Cargo Handling and Base Development. The Operations Plan did not deal in sufficient detail with the problem. The Forces Afloat had little knowledge of Base Development Plans and of the composition and responsibilities of the Naval Base. The ServiceForce was Type Commander for Advanced Base Units, but had no Command Authority over Advanced Base Assemblies after they embarked on an operation.

228 The unloading and setting up the Port Director facilities ashore, since the Naval Base Commander had no authority over construction, always presented a difficult problem. Interference by other activities also complicated the Port Director's task.

230,234 235 It was found that the Port Director had to function as a general information and Liaison center in the early stages of the operation.

The Amphibious Forces were anxious to withdraw at the earliest possible date to prepare for the next operation which always was urgent.

The Naval Base Commander had no ship under his control which provided adequate berthing, office space, and communications for the Port Director, and the Amphibious ships were already crowded. Therefore, until such facilities could be built ashore, it was extremely difficult for the Port Director to function.

Under these circumstances, it was not surprising that major differences of opinion existed and that it took a long period of patient effort to reconcile these differences and solve the problems.

In March and April 1944 many discussions were held between Service Force, Cincpoa, the Staffs of the prospective Island Commanders GUAM, TINIAN, and SAIPAN, and the Commanding Officers of LION SIX and GROPACs SIX and EIGHT with a view of improving the organizations and operation of the Port Directors in the MARIANAS Campaign.

In May 1944, Captain Archer M. ALLEN, USN, reported to ComFwd-Area at ENIWETOK as Shipping Control Officer. In April 1944, Commander E. W. CLARK,USN(Ret.), reported to Cincpac-Poa at Pearl as Convoy and Routing Officer.

In May 1944, Lieutenant Commander BATTLE, who had been serving as Assistant to Port Director in ComMarGilsArea, after consultation with the Advanced Base Section, prepared the first draft of the Port Director Manual for Advanced Bases in the Central Pacific Area. Lieutenant Commander J. A. PELL undertook further revision and development, and after review by ComF dArea, it was approved and issued by Cincpac on August 14, 1944 as the first official definition of the duties of a Port Director.

At the same time discussion with the Director of Naval Transportation resulted in plans for the establishment of a Port Director's School at Port Hueneme and the selection of more experienced officers as Port Directors for new units.

As each new movement was planned, special consideration was given to the Port Director organization and equipment, and to the problem of turning over of Port Director functions from the Amphibious Force to the Naval Base.

This latter problem involved serious complications which were solved slowly in successive stages. The formation of the B-4F and
231 B-4G Components was beneficial. More experienced officers were gradually provided from the United States, and, by withdrawing officers from established bases to form the nucleus of new units. Later on, the reduction of Naval activity in the European Theater provided some experienced officers, but the supply never equalled the demand, and the Port Directors seldom held the rank commensurate with their responsibilities.

It is necessary for the Port Director to start functioning while an operation is still in the combat phase. This is obviously
216 impossible if elaborate shore offices and communications must first be established.

In his report of the GUAM operation, Rear Admiral REIFSNIDER, Commander Amphibious Group FOUR, discussed in detail the problems involved in transferring control of port operations and shipping from the Amphibious Command to the Naval Base Port Director.

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225 He recommended that a special vessel be fitted out as a Port Director Ship and that the Port Director aboard this ship accompany the assault. In this way he could begin his work early, assisting the Amphibious Force Commander during the assault and upon its conclusion, and operate effectively without having to wait for the erection of the shore facilities and communications.

It was too late to accomplish anything along this line for the WESTERN CAROLINES Operation, but at IWO JIMA the suggestion of Admiral REIFSNIDER was followed.

While it was impossible to provide a suitable vessel for this
222,226 duty, Service Force did obtain LCIs 812 and 813 from the Amphibious Force. The Advanced Base Personnel Administration at Iroquois Point converted these LCIs to Port Director and Headquarters Ships. This involved building and installing office space, desks, chart boards and stowage, a distiller, additional radio and searchlights, and electric power. These vessels were first used at OKINAWA and while

inadequate they were of value.

The organization and instructions for A Port Directors Office, Annex I, prepared by Commander John C. HUNTINGTON, USNR, reflected the lessons of a long period of painful experience. This unit functioned well from the start and with minor modification those instructions should be a satisfactory model for any future operation.

The provision of two LCIs for the OKINAWA Campaign was admittedly only an inadequate solution of a difficult problem. However, ComPhibsPac in a dispatch praised the efficiency of this new method and asked that it be repeated and further developed for the next operation. In any major operation in the future the Port Director should be provided with a ship which can carry a minimum Port Director Group of 32 officers and 76 enlisted men, and can provide complete supplies, boat transportation, berthing and office space, and communications, both radio and visual.

The minimum requirements of the above are:

Berthing space	32 officers 76 EM
Office space	22 officers 17 EM

(exclusive of communications shack)

RADIO

RBH Receivers - 2 TCS Transceivers - 2 TCS Remote - control Unit (Bridge) 1

MBF Transceiver - 2 SCR 610 Transceiver - 1

SCR 608 Transceiver - 1 MBF Remote-control Unit 2

Plus Antennae and power supplies

VISUAL

12" Searchlights - 2 Signal Flag Board - 1 24" Searchlights- 1

Chart storage: 6' x 4' x 4'

Space for routing charts: 4' x 3' x 4'

Blackboards: 160 square feet.

Boats: Plane rearming - 2
LCVP - 3
LCP(L) - 1

It is considered that a ship of the APD 47 class is the smallest suitable ship for this purpose.

It is recommended that such a ship be provided for this duty in any future amphibious operation.

Experience has shown that a Mobile Communications Unit of about four officers and forty-six men and 113 measured tons of equipment should be attached to the Port Director's office to operate ashore after the first echelon of the B-4F and B-4G Garrison shipping has reached the target.

VIII-E - GARRISON BEACH PARTIES

Garrison Beach parties were organized, equipped, trained and staged by the Advanced Base Section of Commander Service Force, Pacific Fleet.

305 They were designed to handle standard beachmaster and beach communications functions between the time of departure of the assault beach party organizations and the time when the control of unloading was assumed by the Naval Port Director and the related troop organizations concerned with unloading. Their periods of activity varied greatly, depending upon the physical characteristics of the beaches or ports and upon the efficiency of the organizations scheduled to assume the permanent responsibility for the unloading of cargo.

304 Garrison Beach Parties ranged in size from the so-called standard party established by Cincpoa serial 03060 of 8 July, 1944, to the large Garrison Beach Battalions established for Okinawa by ComServPac serial 00638 of 17 February, 1945, and for the occupation of Japan by ComServPac serial 003713 of 17 September 1945. They were always tailored to fit the specific job, but were basically designed to perform the following:

MISSION

"The mission of the Garrison Beach Party is to control
294,302, and expedite the flow of supplies and personnel from ships of the later assault, re-supply, and garrison echelons over the beach during the early phases of the occupation of a base. This will be accomplished through the exercise
293,295 296,298, 299 of usual beachmaster functions such as control of boat traffic, landings, retractions, salvage and emergency repair of boats and craft, shore-to-ship communications, and liaison with troop Shore Parties. A beach-head first-aid station will be provided, as well as a team for
297,303, the disposition of unexploded ordnance found in the beach
300,301, area or adjacent waters. A construction detachment is (sometimes) included to handle some unloading and limited amount of beach or pier improvement."

Starting at Kwajalein, where Service Force supplied the basic elements in the form of several B-4D (Beachmaster component, Large) units, Garrison Beach Parties served with increasing usefulness in the following assaults or operations: SAIPAN, GUAM, TINIAN, ULITHI, ANGAUR, PELELIU, IWO JIMA, OKINAWA, IE SHIMA, and the occupation of JAPAN at SASEBO, NAGASAKI, and FUKUOKA.

Basic directives, organization plans, and pertinent notes on Garrison Beach Parties will be found in Annex L.

VIII F - JOINT CARGO FACILITIES.

Great progress in Cargo Handling was made during the war,
238, especially in devising new methods of handling cargo, increased palletization and improving the amount and quality of equipment, and in organizing and training personnel skilled in this work.

The formation and training of Construction Battalions Special by the Bureau of Yards and Docks, the organization of Advanced Materials Handling Groups by the Bureau of Supplies and Accounts, the development of the BBB Loads and the Type "A" Block all were major contributions.

The BBB Loads and Type "A" Blocks were the product of the combined efforts of the Service Force, Cincpoa Logistics Section, The Bureau of Supplies and Accounts and various Naval Supply Depots, and they not only simplified ordering supplies but also lessened the problem of Cargo Handling.

There is no question as to the value of maximum degree of palletization of cargo after a base becomes well established
236,237, 243,245, In the early stages a certain degree of palletization is desirable. Only a well-informed planning staff, taking into consideration all the factors involved, can determine the timing and degree of palletization ordered.
Among the factors governing this are:

Type of Assault.

Strength of resistance expected.

Weather conditions.

Surf, reef, and beach conditions.

Anticipated date of completion of roads.

Anticipated date of pier and wharf construction.

Time of arrival and adequacy of lifting equipment.

It should be remembered that the sooner a high degree of palletization can be attained, the sooner the unloading capacity of the port can be increased and the sooner that security of stores from weather, handling damage, and pilferage can be obtained.

Of special value was the development of the caterpillar mounted Fork Lift.

The following references are of interest in further study of these developments:

Materials Handling Manual, U.S. Navy BuSandA Publication No. 13.

Lock, Stock, and Barrel, ComServPac 1945.

249,250 Compound Interest. A Few Pointers on Advanced Base Cargo Handling. ComServPac 1945.

The problem of smooth coordination of all the commands in the Garrison phase of an amphibious operation in handling cargo from the holds of the ships to the organizational Supply Dumps, is extremely difficult to solve. While much progress was made in successive operations and at Okinawa 1,015,374 measurement tons were discharged during July, we cannot be satisfied that we have obtained the final answer.

We can safely assume that there will never be enough lifting equipment, shore transportation, and skilled personnel to satisfy all demands of a beach-head. It is, therefore, of the utmost importance that the most efficient use be made of what is available and that the units handling this equipment be trained and organized well in advance of target date.

244, 246, 247, 248

Nothing is of more importance in Amphibious Operations and Base Development than rapid unloading of cargo and
239, 241, 242 prompt and accurate distribution thereof on the beach. There was relatively little difficulty in getting materials off the ships and to the beach. The bottleneck invariably occurred on the beaches.

The history of every operation is full of discussions of this subject. Prior to an operation scheduled for the summer of 1945, but subsequently cancelled the organization of a JOINT CARGO FACILITY was prepared by representatives from staffs of Cincpoa, ComServPac, and ComGenPoa and the staff of the prospective Army Island Commander. This JOCAR organization and operating instructions is included herewith as Annex H of this report.

It is considered to be the only organization yet prepared which is designed to function effectively under the Amphibious Commander during the assault, and later assume full responsibility under the Island Commander during the consolidation and Garrison phases.

It is recommended that JOCAR and Port Director Organization be carefully and jointly studied with the Army for further development and revision and issue as STANDARD ARMY-NAVY OPERATING PROCEDURES.

VIII G SUPPLY AND SUPPLY DEPOTS

The Chief reason for building a large Naval Advanced Base is to provide a reliable source of supply in the combat zone. The planning construction and operation of the supply depots in the Pacific Area is too large a subject to be dealt with in detail in this report. The Bureau of Supplies and Accounts has complete files on this subject and those together with the report of the Fleet and Force Supply Officer cover this subject much more completely than anything which could be written within the limits of this report.

As stated in Chapters 3 and 4 certain developments were
317,336 of particular interest and because of their importance the references are herewith repeated.

History NSD Guam Illustrated catalog NSD Guam.
Fleet Service Office NOB Guam,
Base history NOB Okinawa 1945 Special reference to Section VII,
Commander Naval Bases Sub-Section 4 pages 13 to 31 and Appendix E Naval Supply Depot.

VIII G FLEET SERVICE UNIT

It was realized early in the existence of Advanced
251, Bases that unusual means would have to be used in the servicing of the Fleet. This situation, insofar as Fleet Service was concerned, was attributable to (1) The large size and consequent dispersion of the Supply Depot, (2) The constant shifting of stores from Area to Area attending upon the rapid growth of the base, (3) The technical considerations involved in making issues from the spare parts distribution center (BuShips spares), Radio Radar and Sonar spare parts center, or class 16 material pool, and the ordnance spare parts Annex, and (4), The constantly changing situation in the harbor involving deliveries of materials to ships there present.

This problem of special service was solved by the establishment of a section in the Naval Supply Depot known as the Fleet Service Office.

FUNCTION

257,258 The functions of the Fleet Service Office were (1) To act as receptionists to Fleet personnel desiring to use the ser-
253 vices or facilities of the Naval Supply Depot (2) To provide
261,262 information and guidance in the use of those facilities (3) and to provide follow up information on requests for material or services.

PHYSICAL PLANT

260 To accomplish this purpose offices were erected and staffed at the waterfront. Assistance in the preparation of requisitions was given, a transportation pool was provided for the use
259, of customers of the Naval Supply Depot. An up-to-date directory of Naval Base facilities and functions was compiled for the guidance of the fleet supply personnel. Information on stock status was collected, posted to stock cards in cabinets, and maintained to reflect current stock status. A portion of the boats and barges in the harbor were allocated to the Fleet Service Office by the Commander NOB for the purpose of making deliveries. Refrigerator units and provision warehouses were erected at the waterfront to take care of the fleet requirements and to eliminate a long haul on bulky provisions destined for the fleet.

RESULTS ACCOMPLISHED

254, 255, The operation of this office especially through its coordination of operations based on advance information saved Fleet personnel countless hours of lost effort in finding their way around the base, in determining what requests could be honored and what action could be taken to obtain material not in stock, in obtaining information as to when and where material would be delivered, in making arrangements for fueling ships, and for

the delivery of supplies by water transportation.

252,256 In short it attempted to duplicate, and did duplicate, the shopping service of a large, modern department store.

VIII I SHIP REPAIR

The Ship Repair or Industrial Department usually is one of the major activities at a large Naval Advanced Base.

In Bases where, due to lack of time, major Ship Repair is provided only by Floating Facilities, repair for Small and Amphibious Craft is required.

In any event, a knowledge of the best means of establishment and operation of Ship and Boat Repair is of the utmost importance to Advanced Base Planning.

The report of the history of establishment of the E-6 component on Berlin Island Kwajalein Atoll forwarded to CNO via BuShips by Service Force letter 3210-90 of 11 December 1945 is interesting and informative.

The establishment and operation of the Industrial Department (Ship and Boat Repair Facilities) of the Naval Operating Base at Guam was a notable contribution to fleet support of particular interest was the fact that this facility was erected entirely on an area which was completely underwater at the time of the assault. This coral fill was placed by Service Squadron Twelve from material blasted and dredged out of the harbor.

The below tabulation of ships repaired by NOB Guam during the March-June Quarter of 1945 is conclusive evidence of the Service rendered.

TYPES OF SHIPS AND NO. OF EACH TYPE REPAIRED DURING QUARTER

TYPE	NUMBER	TYPE	NUMBER
BB	6	ARS	3
CA	4	ATA	6
CL	2	ATR	10
CVE	16	YMS	42
DD	29	YTB	8
DE	41	YTL	7

TYPE	NUMBER	TYPE	NUMBER
DM	6	YP	4
DMS	4	YF	6
APD	17	YD	1
RC	27	YDG	1
SC	30	YW	1
AK	16	YO	2
AKS	2	YG	1
AP	2	PY	1
APA	12	LST	98
AH	3	LSM	54
AS	3	LSV	1
AM	24	LCS	6
AMC	3	LCI	60
AN	6	LCT	52
AO	5	IX	6
AOG	3	DREDGES	9
AG	1	DRYDOCKS	5
AGC	1	PGM	2
AGS	4	AF	2
AGL	3	AFF	3
AVD	2	ATF	6
APB	1	FH	2
AVS	1	FS	10
APC	12	LT	1
WSA (MERCHANT)	44	TOTAL	740

Total amount of ships of all types repaired during quarter 740
Total amount of types of ships repaired during quarter 61
These totals include 1 April until 22 June 1945.

VIII J BOATS

Probably no single base function influences the success of a base in the early stages more than the operation and maintenance of sufficient boats. The arrangements for this purpose were often inadequate because the Garrison Boat Pool was outfitted, so far as boats were concerned, from the boats left at the target by the amphibious forces. The condition in which these boats would be found was unpredictable due to the uncertainties of the assault, and to the reluctance of ships to leave their best boats at the base. In numerous cases the Garrison Boat Pool was compelled to operate with a reduced number of boats in very bad shape.

359 Mobile repair teams that could be sent in with the
355,361 assault, early shipment of spare parts, and the development
356 of such special devices as pontoon drydocks and Jaheemies all
354,357
358,360, assisted in resolving the difficulties. Additional crews and outfits and special adaptations of landing craft contributed to smooth operation of the harbor.

362, The life of small boats in unprotected harbors will always be a short and difficult one and, although much has been done to improve the operation, it will always be one involving great physical discomfort and rapid depreciation of material.

VIII K HARBOR DEFENSES

The question of Harbor Defenses requires a great deal more study before final conclusions can be reached as to the requirements for post-war planning. There was excellent coordination between the Service Force and the Mine Force in the planning of the installation of nets, sono buoys, and other harbor defense equipment. There is no question but that every effort should be made to provide the maximum amount of floating equipment for the installation and care of this item. In temporary bases, everything should be handled from afloat. In permanent bases, shore installations should be built. The extent to which we should go in planning for the future is subject to question. Many officers are of the opinion that we expended entirely too much effort in the planning and installation of elaborate harbor defenses. The fact that the Japanese did not conduct an aggressive submarine warfare against our logistic forces particularly the fact that they made no major attacks on large concentrations of anchored shipping, can easily mislead us in this respect.

VIII L - CAMPS AND RECEIVING SHIPS

The problem of provision of proper camp equipment for each unit and the early construction of adequate Receiving Ship facilities was very difficult. In the interests of conservation of shipping space and the more economical operation of camps, an attempt was made to send in large, integrated camp units to the Naval Bases on Okinawa at the earliest time at which those facilities were authorized by Cincpac. The ever-present problem of beach capacity made

it necessary for the personnel landing in the first echelons to carry the absolute minimum of equipment and it was known that all units would have to live under extremely primitive
270,375 conditions for at least the first 60 days. In addition to the camp equipment for the Naval Base units, a considerable factor was added to take care of the early establishment of Receiving Ships adequate to take care of survivors and other transient personnel from the Fleet. Furthermore, the construction material pool ships had large quantities of camp equipment and material.

These plans did not work out satisfactorily.

In the first place, personnel was not always loaded on the same ships that carried the camp equipment. In the second place, while the camp equipment was echeloned in an orderly manner with sufficient time to provide for personnel, the exigencies of combat operations made it impracticable to call the ships up for unloading in strict accordance with the echeloning schedule. The result was that Naval Base per-
363,364, sonnel in many instances lived under unsatisfactory and ex-
366,367, tremely primitive conditions for a much longer period than
368,371 had been expected and survivors and other transients were not
372,373
379 given proper housing facilities.

For the future, all units should travel with sufficient camp equipment to give them reasonable habitation under the most adverse conditions of combat unloading. Large camps should be used in addition to the material carried by the units themselves in order to attain the economy of space and operation in the development phase of the base. Third, in all major operations, a full Receiving Ship with tent housing and adequate galley facilities should be shipped in no later than
364,376, the fourth echelon and should have a very high priority on the
377,378 construction schedule.

VIII M - ORDNANCE FACILITIES

The installation of Ordnance Facilities on Advanced Bases

was uniformly smooth and successful and as a rule encountered fewer complications than other activities.

Several factors were responsible for this:

In the early and most difficult phase of development the Ordnan Facilities consisted primarily of small, highly trained and experienced groups such as Mine and Bomb Disposal teams, later supplemented by Mobile Explosives Investigation Units (MEIU) for Area Control and Administration. These performed a vital, well recognized, and very hazardous duty, and their equipment did not present a serious unloading problem.

The majority of Base Ordnance activity, such as Minesweeping and Mine Craft support facilities was entirely afloat in the early stages. Some Mobile Torpedo Units were primarily for use at airfields and as such did not come under Commander Service Force, while other major Torpedo repair activities did.

Later, as Base Development progressed, many larger Ordnance Facilities were delivered and installed, including Naval Ammunition Depots, and magazines, Torpedo Shops, Optical and Fire Control Shops and Anti-Aircraft Training Centers and Ordnance Supply Annexes.

Again, these units were composed largely of highly trained, specialized personnel. In the case of the Ammunition Depots, Magazines, Mine Assembly Depots, and Anti-Aircraft Training Centers, the were completely self-supporting and well integrated. In each case they had a function recognized by all Commands and, therefore, their establishment and operation were greatly facilitated.

IX

FUTURE PLANS

NAVAL BASES VS. FLOATING FACILITIES

This report has dealt primarily with the problems of building and operating the Advanced Naval Bases that were needed to furnish Fleet support in the war against Japan.

While there were both deficiencies and excesses in this program, and there were many mistakes, nevertheless, the Bases did successfully carry out their missions.

In planning for the future it seems appropriate to consider two questions:

(a) What facilities should be placed ashore?

(b) What is the best method of installing these facilities?

The course of the Pacific War showed instances of the completion of large Advanced Bases too late fully to serve the purpose for which intended.

This occurred primarily because we were able to exploit our combat successes aggressively and thus speed up operations and by-pass the enemy positions, and, secondarily, because it was necessary to maintain a reserve of shore-based facilities to provide for possible defeat in combat.

However, if we maintain a few large, well located bases, it is considered that in any future emergency the needs of the Fleet can best be served by the more extensive use of mobile floating facilities rather than by a program of new major Naval Base Development.

This does not imply that we should not retain the ability to build large bases rapidly. We can well use this type of material, construction, and personnel to augment the facilities of the permanent major bases, as inevitably would be required.

However, certain minimum shore-based facilities are required for any major Naval or Amphibious Operations.

These comprise:

Administration, Port Director and Shipping Control, Communications, both radio and visual, Boats, Boat Repair, Beach Party, Cargo Handling, Shore Transportation, Small Supply, Small Medical, Fleet Recreation.

Other facilities which have in this war been partly afloat and partly ashore can in the average Base be best handled wholly afloat. In this dass fall:

Receiving ship
Harbor Patrol
Fleet Boat Pool and Repair
Fleet Supply
Fuel
Ship Repair
Nets (Initial)

In the case of a large permanent Base:

Harbor Defense
Ship Repair
Supply and Repair for Local Craft, such as PCs and YMs
Fleet Water Supply
Large Receiving Ships and Fleet Hospitals
Net Depot
Advanced Base Construction Depot
Naval Ammunition Depot and other Ordnance Facilities
Amphibious Craft Repair and Storage
Fleet Boat Pools

should be established ashore.

A well-planned conversion of excess Liberty Ships and LSTs should provide us with enough additional self-propelled Stores Issue Ships, Fleet and Base, and Boat

Repair, Barracks, and Distilling Ships,

Construction Equipment and Material Stores Ships

to be part of the Service Squadrons to avoid the need for large shore-based Fleet facilities of a temporary nature.

FUTURE PLANS FOR ADVANCED NAVAL BASES

In many instances a base was deliberately overplanned to take care of unforeseen requirements. In many instances materials in excess of the needs of Naval Base activities proved to be veritable life-savers for other organizations who had either inadequately planned or were faced with sudden emergencies.

There is no possibility of making an accurate estimate of how much unnecessary waste there was in the establishment of Central Pacific Bases.

The chief cause of waste of effort was the arrival of material before it could be utilized. This was largely due to the attempt to echelon the shipments in accordance with a theoretical construction schedule.

For purposes of this discussion, let us assume that the maximum possible overall efficiency of an Advanced Base Establishment Operation is between 60 and 75 per cent. On that basis it is considered that we attained an overall efficiency of effort not in excess of 40 per cent. In other words, we have done things the hard way and can do much better.

If the proposals presented below raise that efficiency they will many times repay the cost of ships and personnel allocated thereto.

The majority of officers who have commanded Advanced Bases in the establishment phase agree that the initial elements should consist of a highly trained, experienced team which should be a Task Group under the Amphibious Force, organized and handled very much as as a Marine Battalion. It is expected that the Battalion would consist of about 1,100 personnel and about 9,000 measured tons of equipment.

126,127 This group should be trained with the Marines and the Amphibious Forces and should have its own equipment and tables of

organization. It should be wholly self-sufficient in order that it may land, erect its own facilities and those required for Port Operation, and lay the groundwork for the permanent Naval Shore Establishment without assistance from any other organization.

At between D plus 60 and D plus 120 the permanent Naval Base Organization should land and take over from the initial group which would then be withdrawn, completely re-equipped, and prepared for a subsequent operation.

Furthermore, the peacetime organization should provide for at least one of these groups in the Regular Service and at least one similar group in the Naval Reserve.

The exact composition of this group is subject to considerable discussion. Annex F contains one proposal, listing major needs, which should not be considered as a final recommendation. However, it can be considered as a basis for further discussion.

The question arises as to whether a detachment of SeaBees should be part of this Task Group. This is not recommended. The construction work that this group should perform is relatively minor and should consist only of that recommended in the Training Section of this report. The members of the group should be trained and equipped to do their own construction, just as they should be trained and equipped to feed and defend themselves.

This organization should not be required to build airfields, major road nets, nor any other major facilities. These, naturally, become the task of the SeaBees and the practice of sending a part of the Garrison Construction Troops in the assault and early echelons for major work on the waterfront and the road net would continue. These Construction Troops, however, would function entirely separately from the Task Group.

The present tremendous surplus of Advanced Base equipment and materials furnishes a source of paid-up gear which could be expended on maneuvers with no cost to the Navy.

Such a group, training with the Marines and Amphibious Forces,

being loaded on amphibious ships and actually landed and set up as a part of Fleet Exercises, could soon perfect its organization and equipment requirements on the basis of actual experience.

It is considered that only by this means can we be assured of the highly trained and disciplined outfit that can do the job the way it should be done.

X

SUMMARY OF RECOMMENDATIONS

III Planning

It is recommended that;

(a) All officers of the Line and Staff Corps be educated in Basic Logistics including reasonable acquaintance with the problems of Advanced Base Establishment and Operation.

(b) The Importance of logistics be recognized by promotion of officers who have performed outstanding logistic service without regard to their so-called "Combatant Ship" services.

(c) Officers selected for instruction at the Naval War College and the Army Navy Staff College be only those officers whose records and service reputations indicate that they have better than average chances of promotion a nd future selection for important staff and command billets.

(d) Serious consideration be given to the formation of a General Staff Corps in the Navy, composed of officers of the line and present staff corps.

IV Material

It is recommended that all Advanced Base Movements leave a rear echelon behind them at the mounting and staging points.

It is recommended that extensive use of Blocks and BBB loads and Construction Material Pool Ships be continued in any future operations.

The material sent in on these ships (Construction Material Pool Ships) should constitute the Island Commander's Construction Material Pool and should be used at the discretion of the Island Commander. This should obviate the necessity for pooling the construction material which is an inherent part of components.

V PERSONNEL

It is recommended that very careful screening of all personnel destined for the forward area be instituted.

Under no circumstances should an officer be ordered to command an Advanced Base Unit entering the combat zone unless he has at least the same rank, experience, ability, character, and physical vigor which would be required of an officer commanding a combatant ship or group of combatant ships containing an equal number of officers and men and that it not be permitted to send any officer or man to an Advanced Base in the combat zone if there be any doubt as to his mental, physical and psychological fitness for arduous and exacting duty.

A recommendation for post-war Advanced Base Training of Naval Reserves made by an experienced Training Officer is here included as Annex (J), and merits of discussion and consideration.

It is recommended that the training of advanced base personnel be designed, to the end that all units should be more self reliant, in accordance with the detailed recommendations in this report.

It is recommended that a staff course be established for prospective Commanding Officers and Executive Officers.

VI FUNCTIONAL COMPONENTS

It is recommended that CNO study the problem of Truck Operating Battalions and Motor Pools with a view to providing Motor Transport Components of 50 to 100 trucks each.

The present component system be generally maintained subject to improvements as indicated by the operation of the proposed Base Establishment Group, and subject to the principle that the future Advanced Naval Bases be kept to a minimum size by the provision of the maximum of Fleet Support Facilities afloat and self-propelled.

VII OPERATIONAL ORGANIZATION

It is recommended that the major staffs for an Amphibious Assault be assembled at least six months before D Day.

VIII SPECIAL PROBLEMS

It is recommended that a ship such as the APD 49 be provided to mount the Port Director in the assault.

It is recommended that JCCAR and Port Director Organization be carefully and jointly studied with the Army for further development and revision and issue as Standard Army-Navy Operating Procedures.

IX FUTURE PLANS

It is recommended that additional Liberty Ships and LST's be converted to various types of auxiliaries so that a maximum pa rt of our future Advanced Base requirements can be satisfied with self propelled floating facilities.

It is recommended that a Base Establishment Group should be organized to operate as a Task Group under the Amphibious Force.

L53/10/7-47/JSB:ks

ANNEX A

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

The material presented herewith constitutes about five percent of the comments and recommendations received by this command in one form or another from 1 January 1944 to 10 December 1945. It has been carefully screened to assure that it includes only material submitted by qualified, informed, and experienced officers.

If contradictions are noted, it should be remembered that many situations will appear differently to two or more qualified observers, and that honest differences of opinion are frequently found between competent and informed officers. Most problems of Advanced Bases are subject to a variety of sound solutions.

It is hoped that the careful study of these comments will convince the reader that the establishment of Advanced Bases CANNOT BE TAKEN FOR GRANTED, and that their successful establishment and operation demanded time and skillful planning, both on the part of the Type Commanders and the Staff of the Prospective Base. Furthermore, this task can be successfully accomplished only by well selected and thoroughly organized and trained personnel who have had ample opportunity to study their specific problem, to learn to work together and to know the capabilities and limitations of their organization and material and who are under the leadership of an experienced and vigorous Commander.

If there appears to be an undue emphasis on troubles it should be remembered that only the most careful and objective study of past mistakes and troubles will prevent their repetition.

It is a task that presents a challenge to the best Naval Officers.

GENERAL GEOGRAPHY, WEATHER, ETC.

(1) From an Official History of a Naval Base:

"It should be noted here that in view of our experience with the flood, any unit in the future who lands in strange terrain should make it a point to pick out a camp site that is on high ground with good drainage, especially

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

if the area is known to have excessive rainfall. Even sites on high ground need good drainage.....The flood area, however, which was known to be a source of danger both before and after the flood, was neglected for five months from the time of the flood before steps were taken to build a drainage ditch, an item which was just a few days in putting in, and which would have prevented numerous repetitions of recurring floods every time we had a rainstorm."

(2) From an Official Report of a Naval Base:

"Storage Compounds: It was found that there was a tendency to designate undesirable and inadequate storage compounds, thus necessitating rehandling of supplies and equipment. It is felt that special care should be given by the high authorities to provide properly drained and adequately large storage compounds as a top priority in the base development plan."

(3) From a Personal Letter:

"Roads here are No. 1 priority. Road building MUST be done FIRST or no equipment will be moved away from the beach and a traffic snarl will occur and is already occuring here at this temporary base. MUD over hub deep is no place to set down freight handling trucks as I saw here yesterday, but what are you to do? Cement bases are a necessity for ALL Supply dumps on this Island, open, closed and tarpaulin covered areas. And I mean this is a MUST.

(4) Letter from a Naval Base Commandor:

"The ground was high, well drained, with two good sized coral sided buildings without roofs. Also considerable of the area had a fairly hard surface. Well, after many trips to the Area Assignment Board, _____ get title to the area and we set up _____. Putting tarpaulins over the buildings, we had a pretty good storage area. By using _____ Base Company we had a fairly good camp and storage area there, although very limited in size."

(5) From a report by CNCT:

"It is evident from the general damage caused to all types of buildings that advanced base types of structures as presently designed are not satisfactory for use at Okinawa. In many cases there were structural failures, but in general it may be stated that buildings covered with corrugated or rolled sheet metal with the usual methods of fastening are subject to disintegration with individual sheets or groups thereof being blown off. These and similar missiles flying through the air at high velocity are a hazard to life and to other structures. During the typhoon of October 9-10 three persons were killed and many injured by flying missiles."

"Prepared roofings of asphalt and felt and even canvas coverings over wood sheathing were blown off and torn from their fastenings. Positive pressures inside the buildings and negatives pressures on the outside lifted their roof coverings."

"Trees and native stone walls gave the best protection. These acted as windbreaks and served to deflect the winds upward. In this connection it is noted that all of the native Okinawan houses are surrounded by high masonry walls and also thick hedges of trees and bamboo."

"During the typhoon of September 16-17 nearly all of the unframed tents blew down but the framed tents, as a rule, survived the storm. During

the typhoon of October 9-10 tents of all sorts blew down. The framed tents, however, wrecked and the canvas torn to shreds. Many of the unframed tents, however, were salvageable and could be erected again after the storm. As a result of these experiences, it is recommended that framed tents be not used at Okinawa during the typhoon season. On the approach of a typhoon it should be a general practice to strike all tents and to use the canvas as a tarpaulin to protect personal belongings and as shelters for personnel. The edges of the canvas should be well fastened to the ground and weighted with earth or sandbags to prevent the wind from entering."

"In general, the arch rib SSAR buildings of 40 x 100 size and combinations thereof to form "Mae West" storehouses and shops suffered a great deal moro damage than the Butler type 40 x 100 buildings. The smaller arch rib 20 x 48 buildings, known as Quonset huts, survived the storm better than all other types of advanced base structures. All buildings were damaged by having sheet metal blown from the sides and roofs. The few northern type huts with solid end bulkheads and with no monitors, dormers or other projections, survived the storm with little damage. In some instances those huts were blown from their foundations. Many of the tropical type Quonset huts disintegrated. All of them suffered varying degrees of damage. Many windows and doors were blown in."

"The 40 x 100 storehouses and shops and also the 100 x 120 "Mae Wests" and combinations thereof were not structurally strong enough to resist the wind pressures resulting from the typhoon of October 9-10. The arch ribs collapsed from direct side pressure. The buildings lacked longitudinal stiffness and the end bulkheads were too weak to resist the wind pressures on the ends of the buildings. The purlins were spaced too wide apart. This spacing (approximately 7') is so great that sheets deflected in the wind and excessive vibration loosened the fastenings until the sheets were blown off. It was noted that the older types of 40 x 100 SSAR buildings in which most of the corrugated sheets are placed horizontally and secured directly to the ribs, resisted the storm much better than the newer type with the sheets placed vertically, parallel to the ribs. The interior columns of the "Mae West" type buildings failed by bending at the points where the bracing connects. Many windows and doors were blown in.

"In rebuilding the SSAR structures, the following is being done:

(a) Additional purlins are being used to cut the purlin spacing in half. The fastenings for the corrugated sheets are doubled.
(b) The arch ribs are doubled, the spacing being reduced to 2' on centers.
(c) Continuous wooden bridging is being installed between the arch ribs at several points.
(d) Continuous longitudinal bracing is being constructed.
(e) The columns on "Mae West" type buildings are being constructed.
(f) The end bulkheads are being reinforced.
(g) Buttresses are being constructed to take most of the wind loads on the end bulkheads (part of these wind loads were previously carried to the roof system, which was already overloaded).
(h) Tiodowns are being installed to hold the covering sheets in place and to prevent lift by the wind.
(i) All projections and eaves are being modified to reduce wind resistance.
(j) All windows will be protected by storm panels."

"Butler Type Buildings: The structural frames of these 40 x 100 buildings in general withstood the heavy wind loads without failure. In some instances the end bulkheads failed and caused the collapse of the roof framing. In

practically all cases the siding and roofing sheets were blown off. The reconstruction of these buildings includes the following work:

(a) The reinforcing of the end bulkheads.
(b) The installation of tiedowns on the siding and roofing sheets.
(c) The revision of gable ends and eaves to eliminate projections and reduce wind resistance.
(d) The installation of storm panels to protect windows and doors."

"The principal damage to the huts was the result of winds blowing in dormers, monitors, porches, etc. In many cases corrugated sheets were blown from the sides and roofs. End bulkheads of the tropical type blew in and some of the northern type and bulkheads were damaged. Windows and doors blew in. In some instances the huts were blown from their foundations, a few being lifted bodily and carried considerable distances. There were relatively few cases where the arch ribs collapsed and these were principally in uncompleted huts or huts which had been struck by other structures or debris. The following modifications are being made to Quonset huts:

(a) Dormers, monitors or projections are being eliminated wherever possible.
(b) The huts are being securely tied down and closed in at the bases to prevent the wind from getting under the floors.
(c) The end bulkheads are being reinforced and built up solid.
(d) All overhangs at the ends of the huts are being eliminated and roofing sheets stopped flush with the end bulkheads. These sheets are being tied down and all openings closed to prevent the wind lifting the sheets.
(e) All windows and doors are being provided with storm panels.
(f) All sheets are being tied down to the ribs."

"The two typhoons have indicated that the only structures which will satisfactorily resist the high wind and wave action with little permanent damage are heavy, solid-fill, steel sheet pile structures, preferably capped with concrete. This type of construction will permit the waves to strike and pass over without serious damage. All other construction is vulnerable. The waves lifted 30 ton stones on breakwaters and washed out fill placed behind this armour rock. Timber piers held up remarkably well except when struck by ships or floating craft. However, in some instances the decking was knocked off the piers by waves."

"Pontoon construction should not be used except in sheltered waters. It is impracticable to successfully anchor or secure a pontoon pier or wharf in an exposed location to resist the battering force of wind and waves. Pontoon barges cannot operate in a typhoon and should be well anchored in sheltered waters."

"The typhoons were accompanied by heavy rains. At least six inches of water fell in a few hours. These rains would flood roads and airfields unless liberal drainage is provided. This had been done at Okinawa and the damage to the roads, bridges and airfields was only superficial."

(6) From Official History of a Ship Repair Unit:

"At _____ as at other recent Advanced Bases, Quonset type buildings were provided. In addition, some Butler types of buildings were provided. Two typhoons were experienced at _____ which showed definitely that some changes in construction should be incorporated if the buildings were not to be destroyed or, in blowing apart, become a serious menace to personnel. It is realized that for rapid construction and minimum shipping space and

weight, temporary buildings must be provided at an Advanced Base. However, in areas where typhoons may occur a minimum number of projecting edges should be left on buildings. For example, the "porch" which extends about 4' on each end of a 20' x 56' Quonset should be eliminated and the sheet metal at the edge of the roof curled down. Part of the roof should not be raised for ventilation as it is this part which the wind rips off first. The side windows should be eliminated wherever possible or else the sheet metal should be firmly secured as this part also is ripped off quickly during typhoon weather. There should be no opening between the building and the ground as the wind gets under the building and moves it or otherwise damages it. In short, the general engineering practice of having no sharp edges and no projecting parts for the wind to get hold of should be followed."

"The Butler buildings are more suitable for Advanced Base work because their straight sides permit greater stowage of material and their heavier frames stand up better under typhoon conditions. However, the use of these buildings must be balanced by the fact that longer time is required for their erection. Advanced Base types of buildings are very susceptible to damage by typhoon. The larger the building, the more likely is damaged. Therefore, it is strongly recommended that, wherever practicable, buildings be constructed not larger than 40' x 100'."

"Where larger buildings are desirable, as at Naval Supply Depots, 40' x 100' buildings, connected by a passageway to permit entry of trucks, should be used."

"In few cases did a building larger than 40' x 100' remain undamaged during the October 9th, 1945 typhoon at _____."

(7) Personal Letter from a Commanding Officer:

"Then we were faced with the problem of some place to put men and materials. So again due to ____ efforts we got an area at _____ and set up _____ _____ and again with no tools and no CB help whatever --air fields came first. Again the Base Company gave us our start. _____ moved in and started the camp, clearing the area, and about 15 May we all moved ashore and have been trying to function as we were supposed to do in _____ -- insofar as harbor and unloading control are concerned. I know you can't picture that and I'm afraid I can't paint it for you without talking to you. Our storage yard is now in two feet of mud -- rolling stock can hardly move -- communications and office piled in a couple of old Jap houses -- water and food just possible to get in -- a little more rain and we won't -- men and materials coming ashore -- and roads impassable."

"Then came the bull dozer, and all the heavy machinery of which we are all so proud. Roads were cut down, widened, graded, fill put in and, worst of all, absolutely all drainage on the eastern side practically ruined. I suppose they figured these roads temporary, and that the permanent roads would be properly built up and drained. There is where old man weather kicked us in the pants. Two weeks ago it commenced to rain and right now the roads in the _____ are all but impassible."

(8) Official History of a Base:

"Extremely heavy rainfall flooded the entire GroPac area near the beach, just as the natives had warned us that it would do. Eight inches of rain fell in eight hours. The camp should never have been placed in this areato begin with. No drainage had been provided and the entire area formed a good size lake reaching a depth of approximately five feet. It ruined both Government

as well as personal gear and equipment. The rain not only fell directly from the clouds, but this particular area acted as a catch basin for all the water running down from higher ground. The flood came so quickly, that efforts to save the gear and equipment were practically in vain. Fortunately, the offices in the Administration area were set on the bluff just overlooking the beach and was just high enough to escape the flood area, although they were just on the edge of it. All personnel tents in the area were flooded out. Those few tents that had wooden decks just floated away, tent and all. Those tents that were well secured with lines and pegs to the ground were just buried under the water which rose above the tent openings. Men discarded all their clothing and attempted to swim in the muddy water to get to their tents to try and salvage what gear they could. This water was absolutely foul because the natives habit of using "night soil" for fertilizer contaiminated the ground, which when mixed with the water, stirred up a combination that was practically the same as that found in any first class sewer. This water also saturated all the gear, bedding, clothing, and personal effects of the men, making it necessary to destroy practically all of it. Washing had no effect on this soiled clothing. The stain was irremovable.

PLANNING.

(11) Letter from a Commanding Officer:

"Another thing is that I know _____ want people who have been at those places to go back to Washington after they leave, in order to answer questions, etc. I know it is a good thing.

(12) From an experienced and responsible officer:

"From a study of the conduct of the operation and the activities of the Naval Garrison forces presently functioning, it is apparent that with a proper organization which is integrated with the Amphibious Force from the beginning and later providing for smooth transfer to the IsCom, the establishment of a Naval Base can be accomplished with precision and efficiency. The following plan is submitted herewith for consideration in the hope that the ideas may be embodied in planning the next major operation."

"It is suggested that administrative organization be revised to place the "Advanced Base Establishment Force" on a par with organizations like AirPac, MinPac, etc., this force to be commanded by an officer of suitable rank and consisting of an Operating Group with an Administrative Command in the rear area (Pearl or Guam).. Possibly a subordinate command in the Continental United States is indicated, whose function is to supervise training, equipping shipping, procurement and assembly. Representation in Op 30 section may be desirable."

"The Operating Group should be a highly specialized, thoroughly competent, and specially selected group of officers and men, commanded by an officer of suitable rank. This group, together with its specialized units, should comprise a TASK Group in the Amphibious Force with specific assigned tasks appearing in the Force OpPlan."

"Each unit should be provided with suitable organic equipment with which to accomplish an assigned task and should move to the target on APA's and LST's. A command ship (AGC - small) should be provided in order to properly handle communications during the assault and early garrison stage."

"As soon as possible, the advance element of the TASK Group should make a detailed reconnaissance of the beachhead area and promptly establish a temporary Naval Base which shall be designated as N.O.B. Annex. The first goal to achieve is to establish a beachhead dump, boat repair and operation

facilities, shore communications, and a temporary bivouac through which to stage arriving naval personnel. As inland dumps or additional annexes are required, they should be established. Permanent sites of naval activitives required by the Base Development Plan should be subject of early reconnaissance and detailed camp and operation features laid out. The site should be developed in a preliminary fashion by a specially trained unit. (The assistance of CB's should not be required for this minor camp construction). Upon completion of staging, the newly arriving components should be installed in their permanent site, receiving expert advice and assistance from the camp construction unit."

"Other units of the TASK Group immediately assumed duties of Port Director (shipboard operation until shore facilities can be developed); Service Force Beach Battalions (rather than Garrison Beach Parties); Boat, Pontoon barge and LCT operating and repair units; Advance Materials Handling Unit; Truck Companies; and Storage Units, Fleet PO's, Base PO's, V-mail units, Air Freight Department, Survivor evacuation, and receiving station units should be in the organization equipped to function on shipboard with earliest establishment in temporary sites ashore to be accomplished. When the situation requires, the whole organization should be detached from the Amphibious force and ordered to the IsCom for continuing operation. The TASK Group should continue to function until the permanent Naval Base Personnel are able to assume their duties without confusion and continue carrying out the Base Development Plan."

"A cadre of specially selected personnel should then be withdrawn for rehabilitation in a rear area. Selected officers should tour the various Advanced Base activities to give the benefit of their specialized knowledge and experience to interested parties. They should then assemble at Cincpac planning headquarters in order to assist in the development of plans for the next major operation."

(15) From an Experienced Planning Officer:

"Furthermore as large a staff as possible should be taken in early rather than wait three months before an effective staff is obtained by screaming for personnel from Service Force. A large planning staff should be included for on-the-spot changes to base development plans. This should include a sizeable number of draftsmen and even surveyors if CBs are not to be directly under the control of the Base Commander. Put in legal officers and personnel officers early in the game."

(16) From an Experienced Officer:

"Organic equipment accompanying the personnel is a must. Don't kid yourself any longer on this point. We have been nothing but a mill-stone on the neck of the whole garrison for lack of a few items of organic equipment (Port Director, who came in equipped, excepted)."

(17) From an Experienced Observer:

"Much of NOB's early trouble and apparent confusion could have been obviated very easily. Two LSTs, combat loaded with selected gear, would have been a Godsend long about D plus 30."

"It is therefore suggested that in the next operation this be done. There is no need here to make up a lengthy allowance list. Materials should include selected camp gear, hand tools, communication and transportation (jeeps, cargo trucks, dump trucks, bull dozers, and cranes) equipment."

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"If one or more of the LSTs could be retained they should be fitted out as Headquarters ships. An LCI is too small for any sort of effective Headquarters operations.

(18) From an Experienced officer:

"Better move your planning staff a little closer to Operations. We need a Civil Engineer on the Staff for planning purposes since it seems that after all these months we not only have to build the bases but plan them too in their detailed layouts."

(19) From an Experienced Officer:

"Before leaving Oahu I mentioned to you the desirability of rotating Officers from the forward areas with those in the planning section and you stated that this should be done, wherever practicable."

(20) From an Experienced Commanding Officer:

"I believe my spending five days at Pearl would be more beneficial than the visits of individual officers from Pearl here. Although I have always felt that such visits are very useful, and believe every one who has come here since I have been here, both from Pearl and from the Department, has been helpful, and has produced results, yet each visitor in most cases has a specialized interest, and it is the over-all picture which needs to be defined."

(21) From an Experienced Flag Officer:

"_____ and _____ have given me a complete review of their visit to Pearl. I am thoroughly convinced that an interchange of visits is essential, at periodic intervals, if we are to derive mutual benefits in our planning functions for Advanced Bases."

(22) From an Experienced Officer:

"One of the worst features of the present set-up on Acorns and GroPacs in getting them assembled, organized, and shipped, is the numerous modifications to the original standard directive issued. Some of these modifications are relatively small, others reach major portions in changes involved, and, almost without exception, by the time a unit is finally assembled and shipped, at least a dozen directives have been received making changes from reference (a) to (izord). Naturally, this causes the original directive to loso its identity almost entirely. The time element involved in meeting last minute changes to assemble personnel and equipment, and obtaining shipping space, frequently makes it impossible to comply with latest directives. DABOP and ATD are really placed behind the eight ball in trying to supply those additional requirements which have often not even been ordered by CNO or assembled by respective Bureaus."

(23) From an Experienced Observer:

"Be sure and leave room for expansion and flexibility in real estate. _____ has 400 acres on the depot proper with 400 more allotted. Fuel area takes in 1.89 square miles, which is too tight."

(24) From Official History of a Ship Repair Unit:

"Shipment and Handling of Material at an Advanced Base: The echeloning schedule provided that building material and transportation equipment be

the first to arrive, but that only one officer and one enlisted man accompany this material. Having learned of the difficulties encountered at other advanced bases upon the arrival of material, i.e., inadequate personnel and facilities for handling, transporting, guarding, and storing in dumps, it was decided to change this procedure. Accordingly, permission was requested and obtained to send out approximately 400 officers and men from the Ship Repair Unit then on the west coast, to arrive at _____ about two weeks prior to the arrival of the material. It was considered that these officers and men could lay out a dump, arrange for transportation, and otherwise safeguard the material as it arrived. The experience of other Advanced Bases had been that material was lost or misplaced or stolen after arrival and that this interfered with the construction of the base and commencement of operations. It must be understood that the loss of even one item, such as a part of a machine tool, can make that tool inoperable. Consequently, it was considered of greatest importance that all measures possible be taken to prevent such loss."

"The arrival of these personnel in advance of material proved to be invaluable. An area for the dump was selected and the dump laid out as previously planned, to show where each item, in accordance with the shipping lists, would be stored."

(25) From Official History of a Ship Repair Unit:

"Industrial Area Galley: A great many manhours can be saved by serving midshift meals (both day and night) to men from a galley located in the center of the industrial area. It is therefore recommended that a galley and messhall capable of handling the largest shift be furnished for installation in all large Ship and Landing Craft Industrial Areas. The April 1945 Outfitting Lists make no provision for such a galley."

(26) From an Official Report:

"On first thought it would appear that the planning group for an Advanced Base Industrial Department should be comparable with that of a Repair Ship, where nearly all planning is left to the Production Officers who perform the work, and I started out on this basis by having a minimum planning group and placing it under the Production Officer. However, as time went on I reluctantly came to the conclusion that at an Advanced Base, where transportation and communication are so difficult and where activities are spread out, and where there is no equivalent to the permanent civilian employees of a Navy Yard, and where most of the officers are found and relatively untrained in ship repair work and had little or no administrative experience, planning was even more important than at a Navy Yard."

(27) From an Official Report:

"This planning prior to arrival on station is invaluable in working out exact details such as shop layouts, detailed lists of additional machine and hand tools, consumables, etc. It was due to this preliminary work that upon arrival at _____ no further work of the sort was necessary, thus permitting all hands to engage in building repair facilities. Owing to poor transportation and poor communications, lack of office space and facilities, it is very difficult to do any planning at an Advanced Base during the initial period. Therefore, if this work is not accomplished prior to arrival on station delay will inevitably result. I cannot too strongly emphasize the importance of this planning period. It is no more than the procedure always followed by any war agency or by an industrial organization."

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(28) From an Official History:

"The detailed layouts of buildings, showing where each machine tool is to be located, must be accomplished before arriving on station. This is another job which the planning section can perform while still at the Advanced Base Section. This layout should also include sewage systems, fresh water systems, drainage systems and electrical supply systems. By having all of this data available considerable time is saved in the field and work can proceed immediately."

(29) From a Commanding Officer:

"All in all it is my belief that the planning, training and equipment were excellent. Any material in excess was certainly put to good usage for other units on the island who were not as fortunate as the Naval Base."

(30) From a Commanding Officer:

"When we came out here the base development plans and components required for operation were pretty well fixed in my mind and all our personnel indoctrinated accordingly. What with the latest changes we are now somewhat confused and it would be of material assistance if you would make up by echelons the components and equipment which can be expected to arrive. Considerable planning has to be done before they actually get here if things are to progress efficiently."

MATERIAL - EQUIPMENT OF UNITS.

(31) From a Commanding Officer:

"Our infantry packs are out of date, and clumsy, and the army knapsack, carried on the back and attached to the haversack by two snaps, is far superior. The blanket and poncho folds in a horse shoe over the outside. Our men have to open up their rolls, with the present equipment, to get at many articles which would be accessible in the army type pack."

(32) From Official History of a Ship Repair Unit:

"The April 1945 Outfitting Lists provide a marine railway for both Landing Craft Repair (E-6) and Small Boat Repair (E-8) components. Installation of a satisfactory marine railway is difficult and time consuming. Extremely accurate surveying and workmanship is required to install a railway without "bugs". More rapid installation of facilities can be made and boats hauled out faster by using one of the following simpler means. This conclusion was reached as a result of detailed observation and study of facilities in use at _____ _____ and as the result of actual experience on _____.

(a) Gilhoist.
(b) 30 ton capacity stiff-legged derrick used in conjunction with transfer tracks (marine railway tracks installed horizontally as storage only--not inclined for lifting out boats).
(c) Heavy caterpillar crane (3 1/2 cu. yd. Lima or Northwest 95-D). The heavy crane, although a satisfactory solution, involves considerable shipping space and assembly problems (if the crane is shipped knocked down as is the usual practice).
(d) Therefore, for future installations it is recommended that the stiff-legged derrick and transfer tracks or the Gilhoist be used for hoisting out LCMs. With either of these schemes a Landing Craft Repair Unit can be put in operation in a very short time and with considerable saving of labor and material."

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(33) From Official History of a Ship Repair Unit:

"Advantages of Jaheemy versus LeTourneau Crane for Lifting out LCVPs: Experience at _____ demonstrated that the Jaheemy is much more reliable means of lifting out LCVPs than is the LeTourneau crane. The LeTourneau crane is a great deal less stable unit--it is very easy to tip it over on rough ground--than is the Jaheemy. Furthermore, the LeTourneau crane requires a special caterpillar tractor fitted with two winch drums for operation. At _____ it was difficult to obtain the proper type caterpillar tractor and after a caterpillar tractor was obtained the winches were continually giving trouble."

(34) From Official History of a Ship Repair Unit:

"The April 1945 Outfitting Lists make no adequate provision for office furniture and office equipment. A great portion (50% in the case of _____ for the first four months) of the Carpenter Shop capacity at Advanced Bases is absorbed in manufacturing desks, chairs, filing cabinets, tables and waste baskets for equipping the Ship Repair Unit itself. Ship Repair personnel have been transported great distances for the purpose of accomplishing repairs to ships--to use them in manufacturing anything is wrong if it can be avoided. Knockdown metal furniture, in adequate quantities, should be shipped to forward areas--there is no increase in shipping space--material now being used for fabricating furniture has to be shipped out anyway. With negligible increase in shipping space adequate numbers of Kardex file cabinets, four drawer filing cabinets, typewriters, adding machines, and comptometers can also be furnished forward units; adequate office equipment will greatly increase the efficiency of all Advanced Base components. Only those who serve at Advanced Bases can appreciate the difficulties encountered owing to lack of these office machines. It is therefore strongly recommended that adequate office furniture and office equipment be included in future Outfitting Lists."

(35) From Official History of a Ship Repair Unit:

"The April 1945 Outfitting Lists do not provide reproduction equipment as part of standard Ship and Landing Craft components. Plan reproduction facilities are essential for all Ship and Landing Craft Repair activities. A standard Ship or Landing Craft component should be furnished one (1) Ozalid machine; augmented units should have a blueprint machine (Poase #30 is satisfactory) in addition.

(36) From Official History of a Ship Repair Unit:

"Photographic Component: A small photographic component is essential for recording Base progress and recording experiences. The April 1945 Outfitting Lists do not make provision for this function in the standard components. An H-17B component (Photographic Laboratory), less aerial cameras, will do this job satisfactorily and is recommended for future Ship Repair Bases."

(37) From Official History of a Ship Repair Unit:

"Pre-fabricated Storeroom Binning and Shelving: The April 1945 Outfitting Lists provide no pre-fabricated metal shelving for Ship or Landing Craft Repair Units. Pre-fabricated metal storeroom binning and shelving should be furnished for Ship Repair supply and toolroom buildings for the same reasons outlined in subparagraph 19(b) above for office furniture. A better job is obtained at less expenditure of time and shipping space. Metal shelving and binning was approved and shipped for the _____ Repair Base."

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(38) From Official History of a Ship Repair Unit:

"Covered Shop and Covered Storage Areas: One of the greatest shortcomings of Advanced Bases has been the lack of adequate covered shop and storage area. The April 1945 Outfitting Lists provide an E-1 component with twenty (20) 40' x 100' quonsets for both shop and storage space. Experience at _____ and _____ indicates that this is about half the covered area that is required; consequently, valuable machine tools and consumables are left in the open and are damaged because of exposure to the elements. _____ and _____ have found a partial solution to the problem by building wooden leantos alongside standard buildings. This is more expensive in material and shipping space than is providing adequate covered area initially. As a result of this experience approval was obtained for doubling the standard number of buildings at _____. By assembling two standard (40' x 100') Quonsets as a Mae West building (102' x 100') 2.5 times the area of one standard 40' x 100' buildings. It is believed this action was entirely sound and should be followed at future bases not in typhoon regions. Mae Wests, because of their large exposed surface, are considerably more susceptible to wind damage than standard 40' x 100' buildings. In typhoon regions covered area should be increased as recommended above, but by the use of additional standard 40' x 100' buildings--preferably Butler buildings, which have greater resistance to wind damage than do Quonsets."

(39) From a Commanding Officer:

"The rapid growth of the Base and its dispersion over a considerable area has required the use of generators for power and lighting beyond capacity of the component equipment to furnish."

(40) From a Commanding Officer:

"Should have plenty of camels available."

(41) From a Commanding Officer:

"Early arrangement for camels to place between plane-carrying ships and barges should be done even to the point of bringing the necessary equipment in in the invasions. Proper equipment for such is not always easy to obtain ashore."

"We had one sad experience, wherein, lacking camel equipment, valuable cargo space of LCTs was used up by using the LCTs themselves for camels. While they were being used for this purpose, we lost the cargo unloading capacity of the LCTs, which was greatly needed at a critical unloading time."

(42) From an Official report:

"Because big machinery was to move about our camp, considerable power cable was laid underground. In this connection, it is well to consider extra wires for circuits that may accrue in later stages of occupancy of the camp. We used roughly 2,200 feet of C.M.R.C. wire, size 250,000, for main feeders, and 15,000 feet of #6 R.C. wire for circuits. Although wiring for the quonset huts comes along with them, it is insufficient for trouble and extra installations that develop later, and an extra 15,000 feet of #6 R.C. wire was found necessary. In addition we used about 15,000 feet of #14 W.P. wire for temporary installations."

(43) From an Official Report:

"Knowledge of the material in each echelon is extremely important, especially regarding the first echelon. Know how the first is loaded

and make sure that hand tools, sledge hammers, axes, and rakes are in the first boxes ashore. Cherry pickers and bulldozers are the boon of the equipment on an advanced base in the early stages--have them early. Another series of items to mention right here and now is plywood (½" x 4' x 8'), 2" x 4" x 20' lumber, and too many nails. These last few items will buy you Jap flags for souvenirs when everything else fails."

(44) From a Commanding Officer:

"With respect to batteries it was claimed that you should have battery charging equipment for a capacity of 50 batteries. Reserves of approximately 1,000 replacements cells should be maintained. Peak for servicing batteries was 50 per day. Repair men had secured the generator of an arc welding set and were using it as a battery charger. It can charge 75 batteries at one time."

(45) From Official History of a Ship Repair Unit:

"The same problem exists with hand tools as with machine tool attachments, and their supply should be increased considerably. Furthermore, due to impracticability of close accounting and proper storage and care, as well as use by unskilled personnel during the early stages of an Advanced Base, many hand tools become lost or unserviceable."

"The hand tool problem can be overcome by furnishing each rated man of the Industrial Department a tool kit such as is furnished to men of the Construction Battalions. These tool kits are listed on pages 5-2-1, 5-3-1, 5-4-1, and 5-7-1 of "Bureau of Yards and Docks Stock List of Advance Base Materials, Equipment and Supplies" dated 1 September 1943 and published by the Advanced Base Section of Yards and Docks."

(46) From an Official Report:

"A recognized feature of industrial administration is a Safety Organization. This is the invariable practice at all Navy Yards. No such provision has, however, been made for Advanced Base Industrial Departments. As man hours (time) is the important element in battle damaged repairs and, as it has been proved conclusively that man hours can be saved by having a Safety Organization, this should be made an inherent feature of an Advanced Base Industrial Department. The various technical bulletins supplied to the Safety Officer of a Navy Yard should also be supplied to an Advanced Base."

(47) From an Official History:

"The machine tool attachments originally listed were inadequate. At first, these attachments were either not furnished at all for a given machine tool or else furnished on an inadequate basis. What must be furnished to a user in the United States is not adequate for Advanced Base use because the U.S. user can readily obtain or borrow additional attachments, replacements, or effect repairs. But the Advanced Base does not enjoy such facile means. Therefore, the supply of these attachments should be on the liberal side. It is noted that the Outfitting Lists as of April 1945 provide an adequate list of these attachments on this matter is included herein because of its importance and to assure that no reduction in the list is made."

(48) From an Experienced Officer:

"Lifting Equipment: It is suggested that a GroPac be equipped with at least two mobile cranes and two cherry pickers. It was necessary for ____

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to borrow this equipment at the time when every outfit was in need of its own equipment. This frequently held up unloading."

(49) From an Experienced Officer:

"It is felt that at least one or two 40' x 100' warehouses should be included in the 1st echelon and erected as soon as practicable to provide adequate protection for gear needing special protection."

(50) From an Experienced Observer:

"The Caterpillar Fork Truck on this operation has proved itself the answer to cargo handling over rough, soft and muddy ground, which conditions are usually found in the development of advanced bases. Not only do these machines make possible pallet and unit load handling under all conditions, but they are useful for handling materials of all types and in all containers. As a prime mover this machine may be used for clearing of areas, to remove trees, stumps, rocks, etc., or to haul bulky objects such as machinery, cases, piling, etc."

"Regarding equipment allowances for future organizations, it is strongly recommended that six Clark Pneumatic tired Fork Trucks of the Plane Loader type, be included in the allowance for this group. This type Fork Truck will supplement the caterpillar type fork truck for use on hard, dry ground. The caterpillar fork truck is indispensable over rough and muddy ground, but on dry ground it is slow and unweildy, constantly digging up an otherwise smooth hard surface. With Plane Loader type fork trucks for use in conjunction with the caterpillar types, efficiency of supply dump operation will be materially increased."

"The caterpillar fork trucks, while operating well under all conditions, were found to be rather slow when the dump surface was smooth and hard. Also under these conditions, the caterpillar treads tended to churn up good surfaces. Under conditions of smooth hard surfaces, a Clark "Plane Loader" fork truck with pneumatic tires would be more adaptable."

(51) From an Experienced Observer:

"At this stage it was noted that hand tools and nails were very short, hampering construction work seriously. These tools should have been brought in with the personnel."

(52) From an Experienced Officer:

"Experience has shown the need in the field for extensive use of mono-rail cranes in the various shop buildings. The practice has been to use structural shapes on hand and to manufacture in the shops the necessary mechanical equipment to adapt a chain hoist to a mono-rail type. This is wasteful of material and effort, and equipment should be ordered in advance."

"Adequate flood lighting of the whole Marine Railway area is essential to carry on night work."

(53) From a Commanding Officer:

"Sand bags were at a premium, and were invaluable for fox hole construction and protection. This loose lava soil is like coarse coal dust, and as we dug in on side hills, it was impossible to hold without sand bags. I would suggest an ample supply be provided with the assault echelons, and following echelons, up to and including the third."

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(54) From an Experienced Commanding Officer:

"This has been my third advanced base but the first with 100% organized components. In my estimation they are ample in every respect; there are few items however that I would like to see included in every outfit going forward:

Cranes - Cherry-pickers - Le Torneau's Concrete Mixer - Dozers - Air Compressors.

In our particular case only one ten (10) ton crane was included in our equipment, and this was broken during unloading on the ship. To date we have not been able to secure the necessary parts. The balance of the cranes we were to secure from the Special CB Detachment which landed with the Beach Party. We were also to secure an air compressor and various hand tools from this detachment. As it turned out no special CB detachment was provided; a detachment instead was to come from the __ NCB's, so, of course, none of this equipment ever reached us. The __ NCB (Spec) had their own cranes but their equipment had to be augmented, so, as a consequence, we did not even have a cherry-picker for camp work or to unload our own equipment in the compound. Until we could borrow cranes, a great many delays were caused. I believe a moto-crane should be included in all GroPacs."

(55) From an Experienced Commanding Officer:

"In most of these islands the digging of heads, drainage ditches, etc., is extremely bad due to rock formations so at least one or possibly two air compressors should be included.

"A Le-Torneau crane is necessary in my opinion for heavy lifts. Likewise, a D-7 or D-8 dozer. A concrete mixer should also be included as it is not at all possible to get CB help or equipment when needed."

(56) From an Experienced Observer:

"A motor crane - pneumatic tires - should be a standard piece of equipment. We lost many valuable hours moving tractor cranes for special unloading and salvage jobs which could have been handled in minutes with a more mobile crane."

(57) From a Commanding Officer's Report:

"If possible the Supply Officer should bring one additional 75 KW generator in addition to regular allowance for (A) Initial Port Area Lighting (B) Spare to be used when camp area or shop generators need overhauling.

"No provision has been made that I know of for Port and Beach lighting for unloading at night. The Army engineers have such trucks or trailers, systems with generator and movable flood lights. The operation would be speeded up, injury to personnel would be reduced and loss of equipment and supplies due to pilferage would be minimized if such equipment came in with the GroPac."

(58) From a Commanding Officer:

"The Army did not have sufficient cranes, nor did they have them in on time. Navy trackson cranes and Navy "component" cranes did all the unloading. Later there were dozens of them available but during the first two months there was a great shortage - not on the beach - we handled that, but in the dumps."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(59) From a Commanding Officer:

"To date there are no criticisms to be made about the type and quantity of materials furnished and we have been able to get into business without any delay whatsoever. The only reason the Port Director did not take over entire operation of the port within about two weeks of landing is because we have no communications. We are ready to take over these functions as soon as communications are established. As it is the Port Director is practically running the show anyhow using communications afloat."

(60) From a Commanding Officer:

"Our equipment at this writing appears to be thoroughly adequate. The personnel distribution by components may suffer a little after we get into high gear. I will attempt to function with the personnel I now have by transferring officers and men from one component to another as the situation demands. By doing this, I am sure that the efficiency of the men and GroPac ____ will profit thereby."

(61) From a Commanding Officer:

"The five busses furnished the Base have been a godsend. They maintain a fast schedule between the administration area at ____ Harbor, and Camp ____ and a less frequent schedule between other naval activities."

(62) From a Commanding Officer:

"There was a shortage of Trucks, CT9's, Cranes and Bulldozers during the garrison unloading. During one period the heavy equipment of the assault beach parties was obtained and they worked very satisfactorily."

(63) From a Commanding Officer:

"One LeTourneau Crane belonging to some SeaBee outfit is on the beach. It is equipped with caterpillar tread and is one of the most valuable pieces of equipment on the shore. The soil is so soft on the shore line that most lifts require ramps, and about the only vehicles which could negotiate the terraces were the LVT's, during the initial stages."

(64) From the Officer in Charge of a Garrison Beach Party:

"The LeTourneau crane with Euclid Treads was one of the most valuable pieces of equipment on the island for unloading and salvage. More of this type crane should be taken on future operations. Box hooks and barrel chimes were also scarce and should be issued one set for every two cranes or C-T-9s of the G.B.P.."

(65) From an Experienced Officer:

"It was surprising how many of the outfits on the island were without necessary equipment. This was not true of Service Force Activities, but we received many calls from other activities for essentials, such as bedding, galley gear, mess gear, lumber, nails, etc. Each activity should be held responsible to actually check its inventory against allowance lists."

(66) From a Base History:

"GroPac ____ first transportation facilities, consisting of two repair vans, three jeeps, and two trucks, landed on ___ on ____. Nearly all of this equipment had to be overhauled immediately, and before use, since it had been idle aboard ship for over six weeks."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(67) From a Commanding Officer:

"We are badly in need of sand bags, and if you could expedite a shipment to GroPac of at least ten thousand bags, it would be deeply appreciated. The soil is very soft, and we are dug in mostly on side hills, and it is difficult to hold the terrain without the bags. All available bags are in use in the front lines, and they deteriorate rapidly, with the moist lava soil."

(68) From an Experienced Officer:

"Generally speaking, GroPac _____ through the cooperation of ComServPac was the best housed, best equipped outfit on the island. Other activities were furnished with many desirable items from GroPac equipment. Life was made much more livable as a result of the adequate allowance lists and the splendid cooperation furnished GroPac by the Planning and Supply Officers of Service Force."

MATERIAL - ORDERING AND SHIPPING

(69) From an Experienced Officer:

"Each component or department head should be charged with the responsibility of "knowing his gear" and the gear should be given an individual marking to make it easily identified, otherwise, many sorely needed items will be lost in the general cargo."

(70) From Official History of a Base:

"Regretably, while at Port Hueneme, officers had access only to allowance lists, and from those allowance lists could requisition only items which it felt were required. Material could not be staged until arrival at Iroquois Point, T.H."

(71) From an Experienced Officer:

"All the warnings about personnel arriving ahead of camp equipment has proven all too true."

(72) From an Experienced Officer:

"Proceeding from Pearl Harbor the APA ___ arrived at _____ where an effort was made to transfer communications material and J4A & J4B gear from the SS _____ to the APA ___. This material was well buried in various hatches of the _____ whereas it should have been top loaded on the APA _____ at Pearl in accordance with a dispatch sent to Port Director, Port Hueneme from Service Force requesting space be protected for subject material which was to be loaded at Pearl. The transfer could not be made at ___ so a dispatch was sent to ___ requesting material be unloaded from _____ on her arrival and reloaded to APA ___ upon the arrival of the vessel at ____. All this was accomplished after going through endless red tape, it was well worth the effort however as the _____ was not brought up to the target until several days after the Beach Party were ashore.

(73) From an Officer in Charge:

"The Garrison Beach Party did not have a single piece of equipment ashore with which to begin operations on Green Beach when ordered to do so on ___. Equipment had to be borrowed until boxes started coming ashore, three (3) days after beginning operations. The equipment had next to the lowest priority for unloading from AKA.

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(74) From a Garrison Beach Battalion:

"Under no circumstances should the loading of equipment of the Battalion on transports be other than assault. Care should be taken that the gear and equipment required on shore first be loaded so that it can be taken ashore first. The Priority of unloading of the Battalion gear and equipment should be in the highest category, and not be treated as garrison shipping."

(75) From an Official Report:

"The "block" system of shipment is to be highly commended. It is of great practical value. Supply officers should be impressed with the importance of analyzing the block to make deductions and additions to meet their own individual conditions."

(76) From a Responsible Observer:

"It is considered of utmost importance that the personnel assigned as part of the component actually accompany the material on the same vessel so that there will be no delay in the establishment of the protection upon the arrival of the component at its destination."

(77) From an Experienced Officer:

"At the target Companies A and B were landed at the northern beaches, while C and D were landed at the southern beaches. As cargo rolled ashore, the advantages of palletized cargo soon became evident. Cargo for A and B Companies, having been broken from pallets, was scattered over several beaches and found its way into supply dumps of other organizations. It was necessary for officers and men to comb the beaches and supply dumps for many days to locate this cargo, and in the final accounting a large percentage was lost. All handling was done by hand, there being small use for the fork trucks since the pallets were discarded. This delayed operation of the camps, and the material which was lost hampered the efficiency of the organization."

(78) From an Experienced Officer:

"Cargo for Companies A and B was loaded on an AKA. On the ship the loading officer or troop quartermaster was assigned from a different organization from the Garrison Beach Battalion. This officer was in charge of loading all cargo on that ship. Assault ships are usually not planned for a full load so that if space and tonnage figures for cargo to be loaded were correct, ample space in the ship would be available. However, the estimated measurement tons of cargo was in error, and seeing this, the Troop Quartermaster ordered the Beachmaster cargo of companies A and B to be broken down from the pallets and this cargo used as filler to gain space. Some Beachmaster cargo was short-shipped for lack of space..... The cargo consigned to the Beach Companies A and B was carefully checked for correct space figures to include the pallets. The final figure left a margin of safety to provide for last minute cargo, yet it was necessary to short-ship and de-palletize cargo.

"Company C and D, on the other hand, had their cargo loaded on board an APA, and great care was exerted that no pallets were broken, and the loading was very satisfactory."

(79) From an Experienced Officer:

"Great care should be used in the future to assure that the equipment allowance of the Advance Materials Handling Group be shipped with the group so that the organization is fully equipped upon arrival at the target."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(80) From an Experienced Officer:

"The system of echelons fell apart due to the way in which the Army called up the ships. Ships of the 7th echelon were being called up before the 5th and 6th. This caused the same old problem of having personnel arriving before the camp equipment."

(81) From an Official Report:

"Block shipments reached the base in ample time and were very complete. A few minor suggestions were made by the Supply Department, but were not important enough to itemize."

(82) From an Experienced Officer:

"All the spare parts for the propulsion units did not arrive in time for loading in the pontoon assembly ships. Just why the long delay by _____ since then in filling the order is a horse of another color and I'll try and get the dope on it, but it all boils down to this, for the next large move let's have a pontoon representative on the mainland to follow thru until our orders are complete. Theoretically this should not be necessary but we had better do so to insure results."

(83) From an Experienced Officer:

"Why the repair barges were not placed in the pontoon assembly ships is something else as they were apparently available at Hueneme for loading. DirPac Docks SanFran thought they had been placed aboard but apparently the loading officer at Hueneme took it upon himself to cut them out. His reason for doing, so I'm told, was due to the fact that unloading gear would not be available at the other end to unload the cranes over the beach. This has no bearing in this case so I want to talk with the people at Hueneme in order that they may have a true picture of the function of the pontoon assembly ships so that such errors will not be repeated."

(84) Experienced Port Director:

"The ship on which the two Jeeps were loaded arrived late and the twelve (12) Jeeps scheduled for the fifth echelon, were short-shipped. As a result, Port Director Group was seriously handicapped for motor transport throughout the entire period."

PERSONNEL - GENERAL

(85) From an Official History:

"Any man who was laying in his foxhole dugout and says he wasn't scared, is a prevaricator of the first magnitude. The raids continued for most of the night, with quiet intervals of short duration as successive waves of enemy planes came again and again after being driven off or shot down."

(86) From an Experienced Officer in Charge:

"It was very fortunate that two E-9 units were assigned to the G.B.P. because in addition to repairing small boats they repaired LCTs, performed all repair work on GroPac vehicles until the CBMU was set up, and furnished personnel to the B-4D. Personnel in all units performed their duties in a very commendatory manner."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(87) From an Experienced Officer in Charge:

"In later echelons I believe that more work could have been accomplished in two 9 hour shifts instead of the 12 on 12 off. The troops had been working since "D" day. This would have necessitated the closing down from midnight until 0600, during which time little was accomplished anyway."

(88) Official Report:

"It should be firmly impressed on all hands that they will be called upon to do work not ordinarily imposed upon their rate - work that is just hard, dirty, labor that all hands must do if the operation is to be a success."

(89) An Official Report:

"Working parties: The activity was required to furnish island working parties. During the early period when the echelon unloading was going on, and supply activities were being set up, there was great strain on supply personnel. We were required to furnish approximately five men to transportation, six mess cooks, nine guards, and from 5 to 10 men to outside working parties. These some 25 seamen coming from approximately 50 available seamen worked an undue hardship on remaining supply personnel who of necessity had to maintain 24 hour unloading."

(90) From an Experienced Commanding Officer:

"I am enclosing herewith report of condition of small boats, as of yesterday. They are all in bad shape, and have been worked twenty-four hours a day, with crews nearly exhausted. The boat crew personnel have worked faithfully and doggedly, wet and without meals and are certainly to be commended."

(91) From an Experienced Observer:

"Each major unit--NSD, Industrial Department, etc.--is required to furnish its own guards. NSD supplies guards for their own trucks and its entire area."

(92) Experienced Commanding Officer:

"I find that quite generally now officers and men detailed for patrol for a few days are worse than useless."

(94) Experienced Observer:

"At this point, of the 100 men in the Advanced Materials Handling Group only 30 were available for supply dump operation. Nearly half the men, being artisans, were taken from the group and placed in camp construction. Others, being storekeepers, were taken into the supply office and were not available for materials handling operations. This left a balance of mostly non-rated men, nearly causing a break-down of the supply dump operation. Upon pointing out the result of this dissipation of man-power in view of the time and energy training these men for materials handling, the writer was able to have an additional 30 men returned to the group. The remaining 40 were retained for the other duties outlined above."

(95) Experienced Commanding Officer:

"The need for pilots here is most pressing. We do not have any officers suitable for training as such, but if I ever get any you may rest assured

that they will receive plenty of it. What we must have at Guam are skilled ship-handlers as the harbor is a most treacherous and difficult one to operate because of the great congestion which we must maintain in order to provide even passable facilities. Please don't order any pilots from me but if possible send me some more."

(96) Experienced Commanding Officer:

"As you know, we are urgently in need of pilots and I requested six additional ones making a total of ten. As I see it now, we will need ten pilots at all times as nothing will move in this harbor without a pilot. Even destroyers and submarines refuse to move without a pilot and frankly I don't blame them very much. It is a very hazardous harbor."

(97) Personal Letter:

"Experienced Port Director personnel is extremely scarce in the States. Most of the Port Director organizations are now manned by people who are incapable of going overseas because of physical reasons or have just recently returned from extended tours in the forward areas. We can furnish trained men, but we cannot furnish experienced men in any appreciable quantity."

(98) From Commanding Officer of Base:

"The number of ships is about our limit, with available stevedores, winchmen, etc., though the proposed expansion of the harbor to dock, 13 ships will certainly require more ships' working parties or gangs. Which brings me to our real headache--the three Navy Base Companies. They came here through someone's request for additional stevedores, though they are not stevedores. The first I knew of it was after it was decided to send them. They arrived fairly well equipped, but very shy of personnel, both officers and petty officer. Your prompt response to my appeal for help is greatly appreciated and the commissary stewards', and the cooks and bakers have helped greatly."

"But they need almost a complete change of officers, a greatly increased number of petty officers, preferably chiefs or first class, and some definite policy as to rating the men themselves. There is a confidential letter from BuPers about rating this class of men, and I hesitate to rate the men until I know what the letter lays down as the department's policy. Yet in fairness to the men and in order to maintain some degree of discipline and good morale among them they should be rated."

(99) From Experienced Commanding Officer:

"Following is a brief analysis of the development and construction of the Naval Operating Base activities at _____, covering a period of eight (8) months and involving work where Base Personnel contributed a great deal towards actual construction, as brought out in enclosure (A).

"In erecting the quonset hut camps at the Naval Operating Base, personnel attached to the base were assigned to help the Construction Battalions, roughly in the ratio of two (2) men from the Base to one (1) from the Construction Battalions. Four (4) of these camps were 2000 man camps, or larger, each included galleys and all other camp facilities."

(100) Experienced Commanding Officer:

"Two thirds of our 700 officers and men are now living in quonset huts. Have done most of that building by laying out the hut parts, assigning 20

men who are to live in it and let them build in their spare time, with the help of a carpenter if one can be spared.

(101) Experienced Commanding Officer:

"Our Movie booth, sound and screen set-up is the best on the island. Lieut. Miller of the communication unit did it with spare time help and a lot of ingenuity. We averaged a crowd of 3,000 every night."

PERSONNEL - SELECTION.

(102) From Official History of a Ship Repair Unit:

"Experience during the war on Repair Ships and at Advanced Bases has definitely indicated the necessity for an adequate number of skilled civilian technicians. Technicians will become even more necessary in future because of the increasing complexity of naval machinery and equipment. The following list of civilian technicians is therefore not to be considered exclusive."

(103) From an Official History:

"The practice persisted in by _____ of assigning men serving sentences, awaiting trial or with extremely bad records at Advanced Base units as further punishment or so they might escape a record of such punishment must be condemned. Many such cases were discovered. Also, numerous men were sent here, who had participated in the first battles of the Pacific, upon their return to the West Coast were not granted leave went "over the hill" and, when apprehended, were sent right back out here as a form of punishment in lieu of any legal punishment. Such practices as these created an immediate disciplinary problem which hampered the efficient operations of establishing this advanced Base."

(104) From an Experienced Commanding Officer:

"The arrival of that particular draft really created a situation for us as our facilities were already over-expended, and made it necessary to scatter them all over the Base in Army quarters. Cots, etc., were not available for them. It was also necessary for us to repair many of the Army tents before they could be used at all. The sailors, being a particular "seedy" and "ornery" gang promptly appropriated Army cots, etc., and we spent most of several nights recovering the cots when the Army complained.

"This particular draft belonged to _____ but we had to get a little hard-boiled to force the "Representative" here to become interested in them.

"As stated above, this really was a "salty", "ornery" gang, almost without exception graduates of the "brigs". Our regular personnel promptly found fountain pens, money, etc., missing, and even the Red Cross Huts were thoroughly worked over. I immediately directed my Disbursing Officer to pay them and he and his force worked all night. My hope was that with pay the pilfering would stop, but the hope was in vain.

"I then declared a "Reign of Terror" and I slapped the ring-leaders into the Brig on one meal a day, held "Masts" and "Decks" and qualified as a "Chaplain" as I made "Christians" out of most of them before they left. Beards, ear-rings, and other marks of exhibitionism were Taboo.

"One lad stated at "Mast" that he had been "Shanghaied" and that "They had pulled machine guns on him and his buddies." This I believe, referred to their reception at _____.

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

"Most of them are all gone now with the exception of three still in the Brig.

"Not only was this draft more or less destitute of clothing, but that condition seems to be chronic with all our enlisted transiets and frankly the uniform situation is so far as it pertains to outfits themselves, but more so the non-regulation condition of them, is in my opinion, a disgrace. I believe that much of the tendency to go non-reg is caused by the fact that the Navy has, in this war, such a large number of small craft in command of young, inexperienced officers, who, on taking over, are submerged by the "salty" lads who inform him that the "other" C.O. authorized the mutilated clothing, etc., and the young officer does not possess the qualities of leadership to bear down on the matter, or if he does his crew calls attention to the many other crews around who have "freedom of expression"."

(105) Experienced Officer:

"Preface: This report is being written at the request of the commanding officer of a GroPac but the request was hardly necessary because the writer had already begun the report and intended it as a guide to any First Lieutenant going out on a mission in a similar outfit. The First Lieutenant's task is a big one and a good piece of advice to any commanding officer about to select a First Lieutenant is: "Don't send a boy out to do a man's job." Select a man with a proper background who is known to have the respect and command of the men not only through his experience but also through his age. Throughout the report you will find that there is much advice - take this for what it is worth; it comes from one who had to learn by experience."

(106) Experienced Officer:

"The capability of each and every officer must be known and must be tested before you start shipping them 3500 miles. The enlisted personnel must be known to the officers, and their capabilities and limitation understood."

(107) Experienced Officer:

"The administration of justice on the Advanced Base is appalling. Officers have no idea of how to lead their men and maintain themselves. When I landed with approximately 250 men, every damned officer let the men stand around in the rain shift for themselves, while they chased around to take care of themselves."

(108) From an Experienced Observer:

"The crying need is for officers who know how to handle men. They have a considerable disciplinary problem in working receiving ship personnel and yet they could not operate without them."

(109) Experienced Officer:

"The degaussing function is in the hands of excellent officers of high degree of technical knowledge, but with no practical knowledge. It was necessary to summarily order my degaussing officer into a small boat, give him three days' provisions, and to direct him to personally investigate where he ought to locate his depth range, which consisted merely of sounding approximately 300 feet width of channel. In addition, I had to sit on his neck for one month in order that he would write out an operational procedure for method of running his range."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(110) From an Army Island Commander:

"I have found that the mental attitude of most GroPac people is that they are a collection of specialists and should not be expected to do work other than that for which they are primarily intended. I presume that this feeling springs from the fact that their several "complements" are set up to perform specific services and this fact coupled with the general American tendency towards specialization leads to the feeling that specialists should not be called upon for any other type of work. Of course, this position is wholly untendable at a forward area base and the strict necessities of getting the job done often compel them to do work for which they are not specially trained. I have had infantrymen and artillerymen doing engineer work, I have had members of a Port Company (colored labor troops) manning a battery of field artillery, Air Corps people doing Quartermaster work and soldiers from all contingents doing stevedore work on ships and shore. I think it would be well to have GroPac personnel imbued with the idea that they will have to do some kind of work other than that which pertains to the particular complement to which they may be assigned. This, of course, is a matter of indoctrination rather than organization. I think it is one of considerable importance."

(111) From an Army Island Commander:

"In general terms I should say that the greatest lack in the GroPacs which have come under my notice were the presence of what might be called utilities units. By this I mean some carpenters, plumbers, electricians, motor mechanics and the like."

(112) From an Official Report:

"To meet the demand for a labor component in the Pacific Ocean Area, negro personnel were formed into base companies and assigned to various bases in the Pacific. The first base company left the mainland in April 1943 and was followed by fifty-seven (57) more, the last one staging in October 1944. The following comments are pertinent with respect to base companies:

(a) There was no authorized complement nor did a single officer accompany the first thirty-four (34) companies sent out. The personnel came direct from recruit training centers and therefore were sorely deficient in training for advanced base duty. No gear or equipment was issued prior to leaving the mainland. Negro personnel exclusively were assigned to base companies. Base companies were formed from general detail personnel only to the exclusion of petty officers and Class "A" school graduates.

(b) As a result, the duty performance of the base company was satisfactory in only the few instances where special attention was given to the training and handling of personnel. The performance of the base companies was climaxed by the difficulties encountered when five (5) companies were assigned to duty at Guam. However, the fact was established and substantiated that the difficulties encountered was directly attributed to lack of organization rather than to readical origin.

With the capture of the Marianas and the formation of plans for an attack on the Japanese Empire, the demand for a highly trained labor component, capable of landing with the assault echelons, became acute. Furthermore, it was acknowledged that a continuance of the base company as a unit was grossly inefficient and the cause of a serious waste of manpower. To correct this situation the following steps were taken:

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(a) An intensive study was made of the type component that could accompany an early echelon of the assault, be self-sustaining and efficiently perform the duties of longshoremen. The result of the study was the Logistics Support Company (Component D-23) which was established by reference (a). The complement of this unit provided for five (5) officers and seventy-four (74) ratings among the two-hundred and fifty (250) enlisted personnel thereby assuring the leadership and administration which was lacking in the base company. A comprehensive program for tactical and technical training was developed with the result that the Logistics Support Company has, from the standpoint of organization, proven itself a highly efficient unit. Both negro and white personnel were assigned to Logistics Support Companies which has been an important factor in maintaining good morale and discipline among the negro element.

(b) The use of negro personnel in advanced forward areas and under combat conditions has always been a controversial subject. However, reports from Okinawa offer substantial proof that the standard of duty performance is not a function of race or color but is predominantly a product of leadership, organization, individual qualifications and training. Of the twenty-three (23) Logistics Support Companies assigned to Okinawa, seventeen (17) were composed of negro personnel and their performance of duty by and large exceeded expectations. Yet four (4) of the six (6) companies composed of white personnel made a very poor showing due to the fact that their training had to be curtailed to meet a staging date and much of their gear was missing when they arrived. That the standard of duty performance is a product of leadership, organization, individual qualifications and training and not a function of race or color was again established when five (5) negro base companies were assigned to the Naval Supply Depot, Guam during the early days of the occupation. From a state of insubordination and demoralization that could hardly have been exceeded, fifty-four (54) having general court martial charges preferred against them, there has been established an organization which now compares favorably with other activities on the Island. Composed of the same enlisted personnel, a subordinate command was activated under the leadership of officers qualified for the task with the result that morale, discipline and duty performance soon became normal. An important factor in the success of this organization was the recreation and welfare program that was initiated by the officer-in-charge. Negro personnel should be assigned to duty on the basis of individual merit and ability rather than as a racial group. This is most important from the standpoint of military efficiency. The selection for duty assignment should be made by trained classifiers without regard to race or color. In this connection it should be pointed out that an analysis of grades attained at Class "A" schools indicated a 10% differential in favor of white personnel but where duty assignment has been made in accordance with the ability of the individual whether on land or sea, results have been on a par with white personnel. However, a majority of the negro personnel fall into the lower mental bracket where again it is of the utmost importance that duty assignment and repetitions such as handling gasoline drums, moving piles of lumber, etc., negro personnel in the lower bracket have demonstrated a thoroughly satisfactory performance of duty when properly supervised. But

again no segregation in duty assignment should be made on account of color because white personnel falling in the lower mental bracket could likewise be utilized to the best advantage in a type of work which was commensurate with their classification test.

(c) Exclusion of Negroes from general service duty in the Navy prior to 1 June 1942 required the development of a difficult program under war conditions. The prospects for induction of draftees in any future large scale war and the assignment of a pro rata number of negroes to the Navy indicate that the Navy could gain during peace such experience in the handling of negroes in rates additional to stewards branch rates as would permit the best utilization in war of the man power thus made available to the Navy."

(113) From a Commanding Officer:

"Tomorrow we face the decommissioning of _____. What it may mean in the shake-up of personnel we do not know. It would be unfortunate to break up this group which has learned to work together, and has accomplished largely what they set out to do."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

PERSONNEL TRAINING

(114) From Experienced CinC of a D-23:

"I feel sure that the companies coming out from Pearl will be well trained and this is certainly a place where we can use trained men. Our knowledge and training is being passed on to incoming companies when it is at all possible, but there is a big job to do here and very little time to be used for everything but work. The four companies who recently arrived from the States were woefully lacking any and all training.

"Our company has men who can operate any type of machinery found on any beach. Every company should strive to have as many men as possible in the following fields; Welders, Plumbers, Carpenters, Painters, Water-Tenders, Mechanics, Cement Finishers, Electricians and of course, the usual run of men necessary for the regular camp duties."

(115) Experienced Officer:

"There can be no doubt as to the utility of your training program at Iroquois Point. The snap and efficiency of Loscos 9 and 52 compared with the hopeless state of the four white companies from the coast, was startling."

(116) Experienced Commanding Officer:

"The bivouac training we received at Iroquois was one of the most valuable types of instruction received by GroPac. I found that our men knew how to dig in, and live off packaged rations, and care for themselves readily under fire, whereas other units were almost completely helpless."

(117) From an Official Report:

"I strongly recommend that a course of instruction be held, either at the Advanced Base Section or at some other place designated, for the Industrial Manager, Assistant Industrial Manager, and heads of departments. The place where the instruction is given should be near a large naval repair activity, such as a Navy Yard, to permit technical information to be obtained readily.

"There should be available at the school an adequate number of copies of all publications pertaining to Advanced Bases, and orderly files containing the experiences and recommendations made by the various Advanced Bases. Instruction should be on a formal basis so that maximum benefit is obtained during the short time available.

"A competent officer should be assigned, full time, for liaison purposes with the planning group of each Advanced Base. Owing to lack of this liaison considerable time was lost in getting action from some groups of the Advanced Base Section."

(118) From an Official Report:

"The important thing to remember on these visits is that far more information can be obtained by discussions on the spot with the men actually performing the work than by from-office meetings alone. Wherever possible all officers being ordered to the Industrial Department should be permitted to spend a few days at other Advanced Bases enroute to their permanent duty stations."

(119) From an Official Report:

"As a nucleus for the transportation organization a Logistic Support Company

should be assigned to the Repair Unit. This was requested and granted to the _____ Ship Repair Unit, and proved of inestimable value. Officers and men of this unit had been trained to some degree in automotive equipment and weight handling. However, it was found desirable to give special training to 60 selected men from this unit. Arrangements were made for instructors from various automotive and weight handling equipment companies to deliver a series of lectures to these selected men. They were sent to an Advanced Base Depot in California where all manner of transportation and weight handling equipment was available and they were trained in their proper use and repair. The added efficiency and performance and reduction in maintenance, more than justified the assignment of the Logistic Support Company and it is recommended that this be standard practice for Ship Repair Units."

(120) From Official History of a Ship Repair Unit:

"Officer Personnel

(a) Officer personnel was relatively not as well trained as enlisted personnel. It is estimated that only about 70% of the officers assigned to the Industrial Department were of real use. In many cases there were enlisted men available who could perform officer duties with greater ability than the officers themselves; in some cases I released officers and turned the duties over to enlisted men.

(b) At Advanced Bases, initiative and reliability are prime requisites. Officers possessing these qualities are essential.

(c) Officers chosen from the ranks proved, as a rule, to be much better than officers recently graduated from college."

(121) From an Official Report:

"The First Lieutenant should have a knowledge of his fellow officers as to their capabilities. Uppermost, he should know the men well.

"There is altogether too much work for just one man as First Lieutenant in the early stages. He should definitely be assigned another officer assistant and one damn good chief with plenty of "know-how".

"In order to perform his duties properly, he should have a clean-cut knowledge of his responsibilities as well as those of other officers. Read and almost memorize articles 1040 and 1051 of Navy Regulations and you will know your limits and rights.

"Know what type of construction you will be required to build and then make sure the men know. Teach them beforehand if there is anything new about it. Learn some possible types of ready construction and refer to such books as "ADVANCE BASE DRAWINGS" which is obtainable from the Bureau of Yards and Docks, Washington, D.C. and probably at your training center. Secure a copy of this publication by all means, prior to sailing."

(122) From an Official Report:

"INITIAL STEPS AFTER DISEMBARKATION

"Get your men and equipment to your assigned area, providing it is in safe territory, and learn from Intelligence the necessary precautions to be taken - especially at night. Stress fire control and discipline and absolute black-out. Dig fox holes.

"Have the Sanitation Detail dig slit trenches and perhaps place pipe urinals, and enforce sanitation by disciplinary action if necessary.

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

"You should have a muster list of all hands and all hands should be mustered at least once daily. This prevents wandering off, souvenir hunting, shirking (yes, this is done too!), and insures every man a definite task, at the same time affording good opportunity to pass the word or issue any orders, and assign work details.

"Assisted by the Supply Officer and advised by the unit doctor, select and try to establish some sort of enclosed and covered messing area. Remnants of old buildings make suitable messing areas in such times. This temporary set-up will at least keep trash and fly-attracting material in one spot and not have it scattered throughout the whole area, making clean-up easier and later you will realize its worth.

"Locate the island water point and arrange to pick up your quota in the early stages. Make this a definite assignment for certain men. Meanwhile have men work on your own stills or purifying appartus.

"Incidentally, the usual pitching of pup tents takes place at this stage and there are always a few men who need extra instruction and assistance, so make sure that all officers know how to perform at least the basic tasks and are able to give sensible advice to the men regarding location and erection of tents.

"Usually the island will be pronounced "secure", but the most fighting will take place after you are ashore. In order to play doubly safe, arrange a watch that will consist of about two hours each for five men per night and use double watches, that is, two men per post."

(123) A Qualified Observer:

"In conversation with ____, about the only gripe he had on the GroPacs set-up was delay in reporting of officers assigned to those groups. When he took this up with BuPers, their alibi was that the planning Section, Cincpac, didn't give them sufficient advance notice on dates of requirements for these advance base components. Therefore, the lag in getting the respective officers assembled. Apparently the enlisted personnel problem is not as involved, as most of the units seem to arrive well ahead of the officers. These officers not only need the training themselves, but are also urgently required to train and organize their units."

(124) An Experienced Officer:

"In connection with the administrative department, there is a difficult guard problem. Each organization should assume that practically immediately upon landing they will be faced with (1) the infiltration of the pocketed Japanese who are desperate for water and food, (2) the infiltration of the crooks among the officers and enlisted men on the prowl for food and liquor. Accordingly, I would recommend that the commanding officers study the apparent size of the camp, plan out the perimeter guard and immediately build a guard company with dogs, trip flares, etc., for the guarding of the complete camp. These men should be picked, and I distinctly want it understood that I do not, repeat not, recommend colored men for this type of work. It is not pleasant to try to sleep as ricochets travel around your tent. This component can be dissolved into other components later on. They should be trained with the Marines.

(125) From an Experienced Officer:

"Regarding the sending of training officer to the ____ via Pearl to pick up information, as you know this procedure has been more or less discouraged due to transportation involved, and the tremendous number of sightseers

who visit those places. Personally I am in favor of having officers return to these training activities after they have served in one or two of these expeditions in order that they may pass on the information."

(126) An Experienced Commanding Officer:

"The erection of housing for the Naval Base is a rather low priority but we are doing all that we can to help ourselves. That is to say, I am using my own men as much as possible to build housing. The situation is critical and right now I have men in warehouses, unfinished buildings, tents, etc., etc. SeaBee help is hard to get as there are so many other projects which have been assigned higher priority. They tell me they are doing all that they can to help me. That is what they say, anyhow. I can still fight my own battles here and will probably make it in the long run. You can rest assured that we will not let the E-1 Machinery go to pot. If necessary we will build the thing with the E-1 personnel."

(127) From an Army Island Commander:

"Neither GroPac had people of this sort with them. The Commanding Officers of both GroPacs told me that they could not build their own camps, that either the C.B.'s or the Army engineers were supposed to perform that chore for them. This was in fact done at _____ but at ____ I finally got the GroPac unit to construct its own camp and install its own camp facilities. This took quite a long time and a good deal of pushing but eventually they got it done. I doubt if the unit here at _____ would ever have completed the task. For instance I do not think that GroPac __ had any people in it who knew how to mix and lay concrete. Personally I think it is a mistake to send out any unit for duty on shore which cannot take care of itself on shore. The loads on engineers and C.Bs are always great, extremely heavy, and it is my conviction that these units ought to be used in developing the base as a whole rather than constructing camps for other units. All my artillery units at ____ and at _____ have constructed their own campsites as well as their gun positions and it is the customary practice in the Army for practically all units to be self-sustaining in the field. I think that each GroPac ought to have, as I said above, a utilities section which could take care of setting up its camp and getting into operating condition speedily."

(128) Experienced Commanding Officer:

"Our men were immediately instructed to dig fox holes upon landing, and these were well sandbagged. No man was allowed to leave the holes at night, and no promiscuous wandering has been allowed. Precautions with carbine and pistol were stressed, and there has been no irresponsible firing."

(129) Experienced Commanding Officer:

"My experience to date proves my contention that the GroPac Commander must be a jack-of-all-trades as the best layed plans may become inoperable."

(130) Experienced Commanding Officer:

"We came out well equipped and all hands knew what to do with the equipment. The result has been what anyone would expect. At this point I cannot over-emphasize one of the points which we discussed several times before. Advanced Base units should be thoroughly disciplined and highly trained to take care of themselves during early landing phases of an operation. This training is of lesser importance for later echelons but it is a must for the early ones."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(131) Experienced Commanding Officer:

"SELF-DEFENSE: Officers and men are humiliatingly lacking in knowledge of rifles, pistols and machine guns. Once when Marines moved out of a sector, we were required to man four machine guns. Only sufficient men knew enough about them to man even one. It was necessary for me to establish a range and train machine gun crews."

(132) Base History:

"While at Port Hueneme all men of the GroPac availed themselves of the training offered there. The handling and firing of small arms was stressed as was sanitation. Men were instructed in refrigeration maintenance, operation of water evaporators, assembly of pontoons, operation of small boats, all of which paid dividends in the invasion operation."

(133) Experienced Commanding Officer:

"It would seem a simple matter to train men before they left the continental limit in the duties of a shore patrolman, and to give them a thorough training in use and care of small arms."

(134) Experienced Observer:

"It is my experience that enlisted, as well as officer personnel, apply themselves much more seriously to training, once they actually reach the Pacific area. There are less diversions, and they feel they are actually a part of the forward movement.

"The bivouac facilities at Pearl far surpass any similar training I have encountered in the States, and the sanitation, booby trap and survival lectures are far more complete, and offer actual exhibits which are interesting to the men. Likewise, barrack facilities are such that components can be quartered separately, which is not possible at ____."

(135) Experienced Observer:

"It is recommended that future Advance Materials Handling Groups receive much more thorough training in freight handling, truck unloading, supply dump organization and operation, and equipment operation. It was necessary to spend considerable time in training the group on the job, further complicating the manpower situation. Equipment operators, not being well enough trained, had much difficulty operating under the rough conditions, causing loss of time and, more seriously, increased equipment failures. Equipment maintenance in early stages is very difficult, and by having cranes and fork trucks down for repairs disrupts the whole operation. Nothing tears a crane or fork truck down faster than a poor operator. It is felt that future groups can be given this training before departure. Certain phases of the training which the LION _ group received could have been eliminated, such as the "mock-ship" and small boat handling. In its place should be substituted intensified supply dump training such as supply area construction, including the actual building of a supply dump (or several) from undeveloped areas using mock cargo, both palletized and loose. With this training and additional equipment, future Advanced Materials Handling Groups will be able to handle efficiently all early supply handling problems until an NSD is organized and ready to operate.

(136) Report on Training:

"Operators were chosen and given as much practice as possible on their machines. While with mock cargo, a simulated landing was made and supply dumps set up and operated."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(137) Experienced Observer:

"The Advance Materials Handling Group of the Naval Supply Depot has proved itself the answer to the personnel problem during the early phases of the operation. There is much room for improvement, however, over the function of the group in this operation. Equipment operators were very inexperienced at their machines due to insufficient training. The whole group was rather green for the same reason, requiring much training on the job. The officers, having been trained with the men, were not sufficiently versed in this type of work to take over direction of the operation. As noted above, efficiency of the group was further hampered by reassigning personnel to other activities."

(138) Experienced Officer:

"It is recommended further that the group be much more carefully and thoroughly trained. Much of the training they received, while necessarily given in a hurry, was irrelevant to the job. More time should be spent training future groups in supply dump operation under advanced base conditions. More equipment operators should be trained, and the training so intense as to produce highly efficient operators. This is important because equipment suffers much during the early days of an operation due to rough conditions and lack of servicing facilities. Not having good operators at this stage made equipment maintenance a major problem; further, the men were not good materials handlers and did not work too well together, so that actually the training of these people was completed on the job. This was true of the officers also. The writer and his officers directed all the supply dump layout work and the building of the organization, while these officers observed and gained what knowledge they could as the job progressed. A functioning supply organization was turned over to them when the writer and his group were detached."

(139) Report on Training by Experienced Officer:

"It is recommended that the following minimum procedures be given careful consideration; that they be discussed fully with the Training Officers of the various Training Depots for possible early incorporation into those programs where they are not currently provided.

(a) Component OinC or Senior Officer Present participate in initial classification and screening of Component personnel upon arrival at Training Depot.

(b) In addition to general indoctrination lectures specific Component indoctrination of Officers and key enlisted personnel be provided under direction of Training Staff Officer having had Overseas Base experience.

(c) OinC will draw up preliminary Component organization chart. Assistance in this should be given by Training Staff Officers.

(d) Subsequent weekly meetings of officers and key enlisted men should be held for discussion of personnel and work of Component, progress of training, anticipated field operations, etc.

(e) Component Officers participate in and have opportunity of observing men throughout tactical training program.

(f) Component officers handle weekly personnel and compartment inspection of their personnel.

(g) Component Officers, under Training Staff supervision, assume responsibility of Bivouac training of group.

(h) Component Officers participate in post technical and Operational training of their men, assuming added responsibilities during this type of training.

(i) Close liaison be maintained between Depot Training Officer and OinC of Component.

(j) OinC submit weekly Component report covering training and readiness condition of group."

PERSONNEL - DISCIPLINE

(140) From an Official Report:

"The usual method of mustering men during the early stages of an Advanced Base is to "muster on station" instead of at quarters. With the unsettled conditions existing at this time there is a tendency for men to wander away from the camp and working area. It is essential that officers and men be physically present at quarters and that a minimum of personnel be excused and these only for duties which must be attended to and for which authority for absence has been previously obtained. A figure of 99% of personnel at quarters is not only possible but essential.

"On board a ship it is not too difficult to locate a man; at an Advanced Base it is extremely difficult. For this reason muster at quarters, where orders are published, work assigned, etc., is far more important at the latter.

"I cannot too strongly stress the importance of quarters. There is a natural tendency to "skip" it. Conservatively, I estimate that 25% more work can be accomplished, when the practice is followed. What is more, the unit is operated on a military basis and not as a rabble."

(141) From Qualified Observer:

"Arrange legal section so they can try fleet cases in one day and get personnel back on ship (Ships always want to trade men with NOB -- don't do it, you always get lemons)."

(142) From Qualified Observer:

"Volume of courts martials cases is terrific."

(143) From Qualified Observer:

"The legal department consisted of three officers and a continual general court was held when the fleet was in -- get about 15 general courts a month, average about one summary court a week. (In the early stages a number of generals were held for pilfering and sentences of one to five years awarded)."

(144) From Qualified Observer:

"All the subordinate commands at NOB handle their own discipline but the Commandant has to review all cases. So a legal office has to be big enough to carry this load. If we have a capable and big enough legal staff it will save the Commandant many headaches."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(145) Experienced Observer:

"Early cases for the legal section will undoubtedly be largely pilfering, which they charge as unlawful possession of government property. This they can prove when they catch the man with the goods."

(146) Experienced Observer:

"In the early days pilferage was rampant. Commodore slammed on from one to five years sentences. Everyone we talked with at ____ stressed the necessity of being as tough as possible on pilfering, stragglers, etc."

(147) Experienced Observer:

"Ship Repair men should be sent out to watch the cargo when it is unloaded and guard it from the ship to the delivery point. Post your own armed guard on each truck to prevent pilferage of machine tools and small hand tools."

(148) From a Commanding Officer:

"BOAT POOL: Lieutenants in charge of the ___ Amphibious outfit at _____ lacked character and training as officers. They didn't know how to handle or discipline men. The result was that men grew beards, there was no discipline, everyone seemed to do as he pleased. The officers and men lived in filth unnecessarily -- their own fault. Coxswains were cocky and unruly - smashed boats unnecessarily and were backed up by their senior officers, who were mad because GroPac _ boat pool didn't come in to relieve them."

(149) Experienced Observer:

"In the beginning especially watch security. Have guards on all trucks. Check flow of traffic continually. Get a strong fence as soon as possible and have a tag system with buttons to identify your own men or men authorized to be in the NSD area."

(150) Experienced Observer:

"Entire NSD area is fenced and guarded. They suggest most drastic measures to stop pilfering; they place their own guard on all trucks carrying "temptation items". Guards have orders to first challenge, then shoot over head, then "let them have it". The only way you can control guards is to have your own. The receiving station supplies guards for lighters, ships holds, etc."

(151) Experienced Observer:

"Pilferage is not nearly so much trouble as it was in the early days. Then they found that the greatest amount of thieving came from their own men."

(152) Experienced Observer:

"Rigid traffic control is in effect. No one is permitted to exceed the speed limit of 25 miles per hour in jeeps and 20 miles per hour in trucks (this is a damn good idea). They throw speeders in the brig."

(153) Experienced Observer:

"He believes that when the base is being set up you should "throw the book" at the first offenders. Word gets around and considerably restraining further breeches of discipline."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(154) Report of a Commanding Officer:

"From the beginning, GroPac ...., had to supply its own guard for camps and dumps, to maintain security and order, and prevent trespassing and pilfering. A seaman's Guard was organized, and, due to the wide dispersion of the Base's Activities, had to be built up to a body of 98 men.

"A Shore Patrol had to be organized, to supervise the liberty parties from ships and to maintain order in the Fleet Recreation Center, and at the Fleet Boat Landings. This unit consisted of 3 officers and 49 petty officers, drawn from component personnel.

"Other special details of smaller numbers for each assignment total at least another 50 men."

(155) Experienced Observer:

"It was further recommended that the brig should be manned by Marines because a seaman guard is 'too soft'."

(156) Official Report:

"Losses of from 10% to 20% were experienced in ship store stock. While no proof exists it is felt that the majority of this pilferage occurred aboard ship. This gives rise to the thought that possibly armed guards should be responsible for this material while en route."

PERSONNEL - RECREATION AND MORALE

(157) From Official History of a Ship Repair Unit:

"Training of Personnel - Enlisted Personnel

(a) The enlisted personnel were satisfactory and were equal or superior to men having the same rates on shipboard. The major complaint made by the men was that they were kept too long in the United States awaiting echeloning to an Advanced Base. In many cases about one year elapsed between the time rated men were assigned to Advanced Base training and time they were actually embarked for overseas duty. During this time they had no opportunity for advancement in rating, and they complained that frequently there was not enough work to keep them busy.

(b) These conditions led to poor morale. It is recommended that the features of advancement in rating and reduction in waiting time be remedied."

(158) From a Commanding Officer:

"The area devoted to the Fleet Recreation Center, for officers and men is slightly less than 60 acres. The peak load using this center, up to the date of my departure, was over 20,000 persons on 25 March 1945."

(159) From a Commanding Officer:

"The submarine tenders stationed at ____ the USS _____ and the USS _____, have been most liberal in helping with working parties, as many as 200 men being furnished daily at times. Without this help, the Fleet Recreation Center

might not have been ready to provide recreation for the men engaged in the _____ and _____ operations, of whom a high water number of 20,000 men and officers used the facilities prepared for them with the help of these working parties.

(160) From a Commanding Officer:

"The character of the duty is such that constant vigilance is required to prevent pilfering, intoxication, and the proper accounting of the large sums involved. The present officer in charge is an excellent officer, but he has his hands full with the financial part of the job.

"There has been a peak load of about 20,000 officers using this facility, rarely less than 1,000; it is open every day, and takes in $1,000 to $2,000 daily. The number of officers, the amount of money, and the hours open, all require a larger staff than originally contemplated."

(161) From a Commanding Officer:

"I would like very much to have a band attached to the Naval Base and could use anything from a standard 21-piece band upward. If the band has an orchestra, that would also be a great help.

"Despite efforts to carry out an active program of athletics and recreation, there is a dearth of things to do here and we are particularly short of music. The band could be used to play before the movies and to give concerts on appropriate occasions and, if it has an orchestra, to play in the evening at some celebration or party of individual groups of officers or men.

"Frankly, my Security Guard has a long way yet to go to be a snappy outfit and the Color Guard, with the bugler playing Colors rather badly, while it serves a useful purpose, would be much more effective if I could parade the band at the same time. The members of the band could have the equivalent of battle stations as well as their primary duty as musicians."

(162) From a Commanding Officer:

"Prior to leaving FRAY our Supply Officer tried very hard to get us a few sets of colors. We were able to get two #7's, one of which I presented to the Island Commander at the time he took over the Island. We are urgently in need of colors and it is requested that Commander _____ use his good office and forward us, as soon as possible, two size #6 and four size #7, and four size #10 or 12, for small boats."

(163) From a Commanding Officer:

"The Morale of the Base has been and is excellent. To maintain this high morale in the months to come when the war moves further away and daily duties become more and more like routine chores, requires a definite program. Part of this program depends upon the policy of the Service Force, and cannot be controlled by the Commander of the Base.

"The fundamentals of food, mail, and recreation are already in good shape, but three other phases of morale need help from the higher echelon. I list them below in the order of importance I place upon these three factors.

"First, recognition. Nearly all other Naval activities have a pride in their type of work, and several wear distinctive emblems. The air service, submarine service, and now the amphibious force, all deliberately work for an esprit de corps, within their special branches, and cultivate the feeling among men and officers that what they are doing has special merit.

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

"While Service Force has not the glamour of combat, certainly advanced Base duty shares the risks of the assault and occupation of new bases, with the amphibious force, and the Service Squadrons do a tremendous and often dangerous job without which the combat units could not function. It has been a source of comment and wry amusement among Service Force officers and men to read the encomiums given the amphibious force, who dash in, then leave, while the GroPacs and Cubs, or other units go in with the assault, and stay to clean up the mess, and build a Base.

"Second, promotion for officers and advancement in rating for men. 'Spot' promotions for officers are almost impossible to obtain in the forward areas. I can, and have in individual letters of commendation, recommended at least ten officers who served under me for immediate promotion to the next higher grade. In most cases such promotions would be in the lower grades, and serve to reward outstanding ability and efficient performance of duty.

"More important than the promotion of officers is the rating of deserving men. Our authorized complement has consistently been less than the number of men attached to the Base, and the rigamarole of getting a man rated in excess is time consuming and discouraging. I have in mind a Yeoman 3rd class, who is a stenographer, and recorded the proceedings of three general courts martial excellently, yet cannot be rated. Certainly the process of rating a man should be simplified if we want to encourage men to put forth their best endeavors with some assurance of recognition and commensurate reward.

"Third, rotation leave, and change of duty. Unlike the crews of ships, the personnel of an advanced base enjoy no change of scene. After a few months the duty becomes a routine task with less and less novelty and a consequent increasing lack of interest. Aside from the 18 months rotation, I recommend a liberal attitude towards requests for changes of duty between bases, and from ship to shore, within Service Force."

(164) Remarks on Educational Set-up by Experienced Observer:

"Officer-in-Charge recommends that one officer be provided for every 1,000 personnel and one yeoman-storekeeper for every 5,000 personnel (actually this organization has a total of two officers and twenty-three men and we feel that the above recommendation is extravagant)."

"An adequate stock of manuals must be on hand in order to eliminate much discouraging delay."

"It was found impractical to hold classes during the movie hour (1930 to 2100), so they organized classes to meet twice weekly from 1800 to 1930. Considerable interest has been developed by a forum of the air consisting of discussions of subjects of current interest to the servicemen. This forum is broadcast over the local station.

"The most popular subjects break down as follows: (in order of preference)

(a) business and trade (i.e. shorthand, bookkeeping, electricity, radio).
(b) public speaking and photography.
(c) science and navigation.
(d) history, english, mathematics, and languages.

"Apparently most individuals are interested in studies that will benefit them in getting jobs after the war."

"Total class enrollment has hit 1,800 students, in 97 classes over an eight month period. Average length of classes is eight weeks."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

"The greatest weakness was lack of provisions for study in the language field. Not enough records and books were available."

"Obviously instructors must be carefully chosen from those men and officers willing to take classes as collateral duty."

(165) From an Experienced Observer:

"The NOB here is divided into two sections. Annex #1, our location, is probably the best camp on the island. Sanitation is tip-top -- screened heads and chow halls, good drainage facilities installed, personnel is adequately sheltered. The base company here is the hardest working outfit that I have ever seen. Morale here could not be higher, as every man is extremely conscious of the part he is playing to win the war. It is like a tonic -- you see tangible results."

(166) From an Experienced Observer:

"The drunkenness at the Fleet Officer's Club was disgusting. Possibly better control and much better atmosphere can be created by the following methods:

(a) Have a number of small quonsets or rooms connected.

(b) Install a half dozen small bars located in each of the small rooms or quonsets.

(c) Make some attempt at decorating properly in order to make the surroundings pleasant 'rather than like a stable full of manure'.

"It seems a great deal could be done to prevent the deplorable situation, and actions, that we observed in the fleet officer's club. The same complaints apply in some respects to the recreation areas provided for the fleet enlisted personnel.

"A police detail established by the NOB to augment the S.P. provided by the fleet (the fleet S.P. seems to be negligent and reticent about enforcing order)."

(167) An Official History:

"The enlisted personnel did not have regular working hours and it was not uncommon to work 24 to 48 hours at a stretch without sleep. Working parties were ordered to put up more practical bomb shelters and fox holes for the officers, while foregoing the opportunity of getting the same protection for themselves. This work was usually required after the men had performed a full days work in their regular duties. Lumber and material for these bomb shelters was provided by the Supply Department for the officers, but the men were forced to forage for themselves and make their shelters from scraps found or stolen from whatever source it was available."

(168) From an Official Report:

"The excitement of the tragedy resulted in some of our officers and men getting a bad case of 'nerves'. As a result of this type of person, an un-named officer passed the word, without an official basis for his statement, that an attack by enemy paratroopers was imminent. He ordered all hands in the living area to get their carbines and ammunition, pair off in twos and head for the hills. GroPac __ personnel were never trained for hand-to-hand fighting, in fact, being a 'non-combat' unit, most of them had never even had sufficient training in the handling of their carbines, and some had 'never' fired their

carbine from the time it was in their possession. They were 'scared' and the effect of this 'false cry' was very bad on the morale of the men .... more so, when it was finally determined that the whole scare was simply the overworked imagination of one person."

(169) Official Report:

"The morale of the officers and men, as a whole, is excellent, especially since a few have been granted rotation of duty."

OPERATIONAL ORGANIZATION - COMMAND RELATIONS

(170) From Official History of a Ship Repair Unit:

"For planning purposes, components are used in Advanced Base planning. This is an excellent method, but has in the case of personnel, led to some difficulties.

"Officers and men assigned to a particular component for assembly and training frequently feel that their loyalty belongs to their particular component and not to the organization to which the component is assigned.

"This matter should be thoroughly discussed with the officers and men during the training period and full explanation given that the component system is designed to facilitate assembly and training, and that upon arrival at station the component is abolished and the personnel and material integrated into a parent organization."

(171) From Experienced Officer:

"He is a construction officer and the IsCom has him under his direct orders on an equal footing but senior to the Commander Naval Bases. And you can't have a good organization with two people trying to run it. If that is to be the set up, better pull all line officers out until the Base is built; then make the Constructors run it."

(172) From a Personal Letter:

"Orders to use the LCTs for this purpose came from a high-ranking officer aboard the carrier. In the future, where the Army and Navy were both involved in cargo needs, this would be a good example of where a second war could take place between both branches of the service unnecessarily."

(173) Base History:

"During this period the GroPac staff met and discussed problems and organizational matters with the Island Commander, _____ and his staff. Close relationship in the early days greatly facilitated the accomplishment of our mission."

(174) From an Experienced Commanding Officer:

"All Navy and Marine gear arrived on the first ships to be unloaded. This was wonderful for us but it riled the IsCom and the Army as a whole to see it being unloaded. This happened because the Army gear was not ready for loading at Pearl (except Assault and Engineers). So the Garrison S4 called us and loaded it (later echelon material and personnel) in order that the ships could leave in convoy as scheduled. Even though the Island Base Development Plan called for Army engineers to erect our huts he refused such help; even ordered us to stop building living huts during work hours."

EXCERPTS FROM CORRESPONDENCE AND OFFICIAL REPORTS

(175) Experienced Officer:

"Smoke. Smoke naturally divides itself into shore based and afloat activities. Firm decisions should be reached as to who is to handle the shore based work and who would be responsible to see that smoke is made when the red alert is sounded. My recommendation is that a chemical warfare company be assigned to the commandant of the naval base directly under the anti-aircraft battery commander and that he form a portion of the harbor defense's officers command organization. I further recommend that the operational control of the LCVP's used in making smoke be directly under the senior officer present afloat who is the only officer authorized to set a red alert and direct 'Make Smoke'. I further recommend that all LCI's be assigned to the small craft officer for administrative and repair facilities. In other words, the small craft officer shall deliver his number of LCI's, ready to make smoke at X at such-and-such a time, boats fully manned, fueled and ready to go.

(176) From a Staff Officer:

"As this project develops and takes shape there will be increasing need for a staff. A request has previously gone in asking for a Lieut. Comdr. However, to help round out the Naval organization attached to IsCom it is my personal opinion that it would be helpful to have an officer attached to G-3 and G-4 to interpret and execute naval matters. These officers should become an integral part of their respective sections and they should be Lieut. Comdr.'s or Comdr. They will be most useful if they know the sections' functions and procedure and actually participate in all matters handled by their respective sections."

(177) From an Official History:

"If a distinction had been established earlier between Air Force activities and Service Force activities so that a command organization recognizing this distinction had been put into effect giving each command its own personnel complement and its own missions to fulfill, the missions and tasks assigned this Base could have been better carried out and the overall operation would have been conducted much more smoothly. A constant state of flux has existed because with each major change in mission a reorganization of command has been made."

(178) Experienced Commanding Officer:

"The coordination of Naval Units under Army command is very loose, and to a less degree under Naval Command.

"The Senior Naval Officer should receive specific written orders setting forth his duties and responsibilities. He should be designated Naval Chief of Staff on an equal level with the Army Chief of Staff. The administration must be through the Senior Naval Officer. The functions of the individual Naval or Army Officer may be joint in the operating staffs. This does not anticipate that the command function of each Naval unit would be disturbed. But the Senior Naval Officer would act as reviewing authority without routine disciplinary action."

(179) From a Base Commander:

"Confidentially, the field in which I anticipate the most difficulty is the Island Commander's palpable tendency to consider the bases's relations just about that of another battalion, i.e., he considers it his privilege and responsibility to reach in and control matters of internal organization, such

as whether to use a building for an office, a B.O.Q., or an enlisted men's head.

(180) From a Commanding Officer:

"To date I have been able to get along pretty well with all hands although at times it is very difficult to get people to see the naval point of view. In fact, most of my time is spent in trying to accomplish this task. Wish you were here and I could tell you more about it. I feel very strongly on this and consequently try to avoid pitfalls, which are obvious to me but are not so with people who do not know naval requirements. Of course, I may have a narrow point of view but after all that is why I am here."

(181) From a Commanding Officer:

"The day I left, the IsCom told me that many of his refusals to cooperate with us was due to jealousy on the part of other Island Garrison Forces. We had so much, they so little, that he was faced with a morale problem which he cured by putting a heavy thumb on us. He might have explained his action at the time I would have been able to sell the idea to my men--he didn't and as a result the entire unit built up an individual and collective "hate" for the Army.

"He says that he has been trying for years to get the Army 'out of the dirt' but it's been this way since the Revolutionary War and probably always will be. He hopes the Army will accept Navy standards for living on Advanced Bases rather than to force the Navy Standards down to the Army ideas of living on land.

"We took a lot of the blame that he felt due the Navy as a whole."

(182) From a Commanding Officer:

"Another and important reason for his change of attitude was the removal of the pressure from above and his own increase in knowledge and information of the power of the sea. Also that other bases had our same troubles. He is exceptionally proud of the record made by individual units under his command and believes, now, that they did comparatively better and faster work than those of any other command."

(183) From a Commanding Officer:

"Because, frankly, I do not consider the progress of the Naval Base, and the relationship between it and the Island Command, satisfactory, and it is becoming steadily worse, rather than better. I am receiving too many peremptory orders that are administrative in character rather than operational, and too little consideration of my needs as a naval facility to serve the fleet

(184) From a Commanding Officer:

"At a meeting held last evening with the Army Chief of Staff, all our transportation and unloading problems were worked out, and I look for smooth sailing, without any friction whatsoever, from now on. Everything is finally amicably arranged to the satisfaction of all units concerned, and outside the handicap offered by weather conditions, is functioning nicely now. The broached vessels have all been retracted from the beaches, and our Port Director and Beachmaster units are cooperating with the army transportation unit to the fullest extent, and to their expressed satisfaction."

(185) From Official History of a Ship Repair Unit:

"Unloading Plan

(b) The fact that we were able to use our own men and equipment for handling our material immediately it was unloaded from ships, to transport it in our own trucks, to have it guarded by our own armed guards at the waterfront, on trucks, and in our dumps, accounted for the loss of less than one-third of one percent of approximately 40,000 measurement tons of material."

(186) From a Commanding Officer:

"All our ten in one ration and B Ration which was furnished the GroPac was ordered turned in to the Army dump by the Army Chief of Staff, so we lost it all. The Marines have been more than friendly in helping us out in every way, from the load of equipment to the donation of rations."

(187) From a Commanding Officer:

"The C. of S. remarked to some visitor that no Naval Officer on the Island knew his job. By the same token no Army Officer understood the problems, or understands them even now, that a rough sea presents. They couldn't understand why heavy lifts couldn't come out of rolling ships into small boats, or even into DUKW's."

(188) From a Commanding Officer:

"The necessity of unit of command for military and operational purposes admits no argument. The degree to which this unity of command should extend is open to question. The three services, Army, Navy, and Marine Corps, are different, have differently procedures, attain their results by different means."

(189) From a Commanding Officer:

Specifically, the Naval Base at _____ should be answerable to the Island Commander only for military operational purposes, and should otherwise be directly under the Commander Forward Area and through that officer, under the Commander Service Force."

(190) From a Commanding Officer:

"The authority of the Island Commanders over commissioned units of another service needs to be clarified, and should be more clearly defined. The administrative chain of command of such a unit to the next senior of its own service should not be interrupted, or interfered with."

(191) From an Observer:

"Every Saturday morning two general meetings are held, both under the chairmanship of the Chief Staff Officer. First comes a planning meeting attended by the Public Works Officer, CB representatives and the division head, involved in the particular construction to be discussed. The second meeting is attended by department and assistant department heads. At this meeting matters of importance are discussed by the chairman from a previously prepared agenda. New Base Orders and Memoranda are read. When suggestions are brought up by the representatives at the meeting, opinions are requested from other members of the group. Long rambling discussions and irrevelant comments are immediately squelched by the chairman; the meeting is carried on in brief, concise, businesslike manner.

"The second meeting is followed by a ten or fifteen minute discussion by the Intelligence Officer on the progress of the war over the past week. By using large maps he makes a good graphic presentation."

"In a discussion with the Chief Staff Officer, he stated that one of the primary values of the weekly department head meetings was to create a feeling of working together as one large organization, as opposed to the "little kingdom" idea."

(192) From a Commanding Officer:

"With regard to complement and rank I am glad to see promoted to Captain. I feel that all branches of Naval Operating Base activities, called upon as they are to deal with other activities and with officers who on the average are considerably senior to them in rank, are at some disadvantage. I feel that officers holding positions in the complement should be brought to the rank required by the complement.

(193) From an Observers Report:

"Get CBMU's away from the CB's and under the NOB as soon as possible. They have to put in requests for construction up through IsCom. (Difficulty getting any requests cleared.)"

(194) Observers Report:

"It was repeatedly stated during our interviews with various department heads that without CB units responsible directly to the NOB it was virtually impossible to get anything accomplished."

(195) From a Commanding Officer:

"Just a brief note to voice my ideas on the question which you raise concerning the chain of command for the SeaBee outfits. When I was out there we discussed this and the General seemed to be of the opinion that the tasks were so interrelated that he should be the one directly responsible for completing the construction projects and accordingly it would simplify everything if all the SeaBee battalions were organized into a brigade and worked entirely under him. This certainly seems reasonable and I was in agreement with the idea. However, it would now appear that certain construction projects are, according to the plan, being made my direct responsibility. This being the case, it follows naturally that the SeaBees to accomplish these projects would belong to me. It is basically sound that if I am responsible for the work that I should have full control of the tools whereby it is to be accomplished. In short, it would seem that whoever is responsible for the work should get the men."

(196) From an Observer:

"This interview brought out again the existence of factions, clicks, favoritism, and one group 'gunning for another'."

(197) From an Official History:

"In regard to operations, it would appear that the harbor defense unit in this area could have been more closely integrated. For example, patrol craft have been under the Command of ComMarGils staff, while H.E.C.P. has been under the Naval Base. Fine cooperation has been obtained with the patrol vessels, but the liaison has not been close. During the first few months of operations, there was an Army radar surface detection unit on Carlos Island, less than a mile away from the HECP, but there was no communication or liaison with this unit. It would seem that unification of these units under one command might provide a more efficient harbor defense system."

OPERATION, ORGANIZATION, ADMINISTRATION

(198) From an experienced officer:

The fact that heads of departments report late in these operations and that the junior officers, especially those of little or no value, are received early in the game, the plan heads are frequently at a loss to know just how good their chief assistants are. The result is a balled up mess where no one knows exactly what decision has been made. The chief of staff on the base to which I was attached, called this to my attention, stating that he did not want these junior lieutenants running to him every time they wanted something. Within two days every single section of the department, six in all, had violated this very necessary procedure in order to obtain personal advantages for themselves and their organizations. As a result, the chief of staff was unable to get through personal work which he had to do and was unable to advise his commanding officer as to the various very necessary essentials which were part of his job.

(199) From experienced observer:

With respect to loaning boats to such base activities as ABSD, AMD, SPDC, CB's and so forth, it was suggested that it was advisable to assign a specific boat out on custody with the understanding that the functions which assigned has to maintain it and keep it operating. When a unit feels a boat is its own they will take good care of it and keep it in repair.

This organization was responsible for both operating and repair of boats. This seems an efficient way of setting up small boat service. Apparently by making the same management responsible for both operation and maintenance, greater pride and loyalty was induced. It was claimed that the extremely high percentage of 95% of all boats were kept in operation from D day on.

Should assign boats immediately to a crew and make that crew responsible--if it is their own boat they will take much better care of it.

(200) Experienced observer:

We should support small craft from the section base, not NSD, and have a small supply section for this purpose under either Base Services or Section Base. On the same basis the base services section should be expected to handle all supply for NOB proper. They think it all right to have Base Services set up under the Senior Supply Officer, even though it is not so at ____. The basic idea is to keep the depot on the wholesale business and to keep small inefficient stuff as much away from it as possible.

(201) Experienced officer:

Section Base - The section base unit is the unit which takes care of all the work that is forgotten in the planning of an operation or that is difficult or nasty to accomplish. It requires a large water front and forms a base for the smaller craft which is even more difficult to administer than the large base. It should be properly given bakeries, laundries, fresh water supply, small boat gassing facilities, etc. It requires a tough, thoroughly Navy officer to administer. He should be capable of making decisions without going any farther, so that these decisions will stick. He must have the confidence of the commandant of the base so that he will back him up 101%. It is not a job for a "makee-learn".

(202) Experienced officer:

Communications. The communications department in a combined assault and garrison stage is the poorest group with which we have to deal. The only satisfactory communication is between the scene of action and the pigeon loft. The communications personnel is scattered all over a large area, and is unsupervised by officers and men of ability. There is no trouble with the caliber of the men, but there is trouble with the caliber of the officers trained at Harvard in procedure. They fail absolutely to note their mission. As usual, the commanding officers have used such officers that do not seem to be fitting into the picture as communication watch officers. The routing of the messages oftentimes is fatally bad, and important information goes adrift because the officer is not sufficiently experienced to realize what the message refers to and is not sufficiently wide awake and ambitious enough to find out. The communications discipline is horrible. Messages are over rated in priority in order that they may get through at all. The communications units have omitted in their allowance of personnel any messengers or delivery groups. Since the Bureau of Personnel brings up its components without regard to strikers and other excess men, it is impossible to find these men at large on the base. The physical space occupied by the base is such that the 24 hour service of jeeps, motor cycles, etc., is required to make deliveries of the messages. The organization of the joint communications center is fundamentally sound, but is hard to administer (1) because of the inability of the communicator to handle the personnel problem, and (2) to handle the assignment of work priority to this problem. It is only natural that an officer who has studied radio material and operating procedure a good part of his career should not be capable of a tough organizational assignment.

(203) Experienced officer:

Operations Department. The Operations Department as it worked out until I arrived, was (1) information department on everything except the internal structure within the base proper. When a stranger hit the base, he was immediately sent to the operations department who told them how to get across the island, where to get their transportation, and acted solely in the manner of an information desk. In addition, all incoming dispatches were routed to the operations department and checked to see that the other departments took action on them and attempted to get someone to volunteer for certain functions. For instance: a dispatch received from a vessel, "We have five dead bodies aboard. They are getting ripe. What shall we do?". The problems presented are such as to require at least two officers during working hours from 7:A.M. to dark, and requires one officer on a sleeping watch during the night. No provision was made for this important group of watch officers. Nothing is done on the base until these officers come into action. It is recommended that the operations officers be furnished with a staff of three senior lieutenants of pleasing personality and initiative and ability to take responsibility and make decisions without referring them to the chief of staff. These people are absolutely essential during the construction phases of a base. I would say approximately six months. In order that they may be able to obtain standard operating procedure, it is necessary that all this information be codified and the use of a smart secretary is essential. He should be there practically immediately.

(204) Experienced officer:

Administration Department. The administration department takes care of the housing and feeding, supply of water, etc., corresponding to the duties of the executive officer combined with the duties of the First Lieutenant on board ship. It is not an easy department to run, and requires a good,

smart go-getter. This requires a regular Naval officer, perhaps one taken from the ex-enlisted men advanced in the first World War. The CB's will not, repeat not, build your camps for you. The usual CB commander is too busy with big jobs to handle your small problems. All advanced Base officers must be alert to do with the complement which they have given them, every single thing.

(205) Experienced officer:

Supply. The supply department planning is absolutely essential, but has a very bad fallacy of now being divided into two parts. Freight handling, the largest and most essential division of your base, has been taken away from the supply department (NSD), and therefore there has been a duplication of planning. The freight handling which is part of the NSD, Oakland, is now handled by a captain who is absolutely independent of the NSD. Since the NSD cannot start to function until the materials are ashore and covered storage made available, the large number of NSD employees are farmed out to the freight handling end. When these men are thrown back about three months later, there will be an awful howl of manpower shortage. Approximately 1,000 men are now assigned to NSD logistics supply companies and loaned to cargo handling. In the handling of the supply department, it became immediately apparent that the officers were well trained in supply work, but failed to understand the functions of all the other offices. They had become supply specialists and therefore failed to realize that they were only part of a team. This, I know, is contrary to the policy of the commanding officer of the NSD. However, I recommend that this be rectified in future movements by the consultation method and long and detailed expositions and talks by the various component officers to other officers who may not be interested but who will absorb enough of the overall picture to be able to do their job. This means that all the officers of a command should be assembled at San Bruno or some place where they can get together and do their job. A commanding officer and his chief assistants should be picked well in advance and allowed to see some of the things which go on so that when they go to the field even the ensigns may be able to understand whom to go to and where to get the information that they require in the daily conduct of their business.

(206) From an OinC:

The Beach Party was given no intelligence whatsoever on the target and there seemed to be no one at Pearl Harbor to give us the information we should have. We did not even know the number or color of the beaches which we were most likely to operate on. In the writers opinion the Garrison Beach Party should have at their disposal the same information that the Assault Beachmasters have.

(207) Experienced C.O.:

The Operations Officer at a large base should be of the rank of Commander in order that officers serving under him may be of suitable rank for the positions which they hold.

(208) Experienced officer:

It is essential that a minimum shore based administrative facility be set up as early as possible. This is especially true of naval facilities when the operation is against large land armies covering large land areas. It is true that certain operations can be carried on afloat for some time but there is urgent need for the Base Commander and the Port Director to establish themselves ashore at the very earliest. To do this, camp, office, transport, and communication gear is necessary.

(209) Observers report:

Do away with the component system in every respect, including vehicles, as soon as they land.

(210) Official report:

Transportation: It is suggested that consideration be given to the establishment of a transportation component, with two trained drivers per truck, in order to provide 24 hour operation in the early stages. The following situation was noted at Navy ____: It was found necessary to form a motor pool. No personnel was provided so the order was given for other departments to furnish men for the motor pool. Naturally a division officer would not like to lose his best men, so less capable men from each division were furnished transportation. These were two results - irresponsible men operating costly vehicles and responsibility for individual vehicles should be placed on the individual man.

(211) From experienced observer:

Apparently the most difficult administration problem is eliminating the "component idea". This situation tends to create factions with a "To hell" with the others attitude.

(212) From an official history:

Investigation of the transportation methods used by Ship Repair Units at other Advanced Bases indicated that improvements could be made as follows:

(1) Combine all transportation facilities and personnel under one head. This includes jeeps, trucks, cranes, cherry pickers, floating cranes, boats, and riggers. (The usual system followed was to have land transportation under one officer, water transportation under another, and the riggers under still another officer.)

(2) Vest full authority and responsibility in the Transportation Officer. Require advance notice of use of transportation equipment, so that schedules can be arranged to permit pick-up service and use of vehicles to serve more than one customer on a trip.

(3) Strictly limit the permanent assignment of jeeps to a small number of key officers, and require all vehicles to be turned in to the Transportation Department by 2000 unless special permission has been received for retention. This measure has the additional advantage of preventing officers and men from "gadding" about the island after dark and serves to keep them out of trouble.

(4) Arrange for assignment of special wave lengths to the Industrial Department to permit voice communication between the despatcher's office and the boats. Much of the work performed by Ship Repair Units is on vessels at anchor in adjacent waters. The only means for delivering repair men and material to these vessels is by boat. Unless the boats are so equipped with voice communication considerable time is lost by men waiting. When these radio sets are provided it is possible to have the boats go from one ship to another as the need arises, rather than to have them return to the base each time. Further, it is possible readily to deliver messages from the base to men working on vessels and vice versa.

The measures listed above permitted us to run our Transportation Department with a minimum of personnel and equipment, and made it possible quickly to rearrange schedules when emergency conditions so required.

(213) From experienced officer:

Every component is extremely jealous of its complement and takes steps to hide any non-essential men.

(214) Experienced officer:

I would call to the attention of the commanding officer that upon the arrival of his first echelon, he will be required to start his paper work first thing of all, and he must have his files, file clerks, etc., all set up and ready to function.

PORT DIRECTOR

(215) Experienced officer:

The Port Director has done a superb job. His organization is miles ahead of the other activities. It knew in the beginning what it was going to do and has gone ahead and done it. That sounds simple but it has required wisdom, forethought and vigorous execution. It is a delight to see the results blossoming every day and amusing to listen to the comments of some of the less fortunate components.

Perhaps one observation will be of help to you. It appears to be a mistake to have a Port Director depend on the Boat Pool for boats and crews. The demands on the pool exceed its capacity. They come from everybody and the Port Director is merely one more supplicant. For proper performance he should have his own boats and personnel and he needs LCVP's or something of that sort far more than he does plane rearming or plane personnel boats which are pretty frail and no good in a swell. Pilots have to meet ships well outside and it takes something that is both rugged and seaworthy to do the job. YTL's are excellent for the purpose. Incidentally the CUB's Garrison Boat Pool is here without a boat to operate. I believe the first craft the CUB will have will be the plane rearming boat which your organization obtained for me and which is due to arrive today, and thanks to the LCI and Lieut. _____'s assistance in providing knocked down furniture my organization will be first in a good many other things.

(216) Experienced C.O.:

Heretofore, the Port Director, his Officers, men and equipment have been forwarded in the third or fourth echelons. If you recall, our Port Director was to move forward according to that same procedure. Since GroPac ___ was required to take over the port as quickly as we did, it was to our everlasting benefit that the vessel in which the Port Director and his people were being forwarded, was ordered in away ahead of its schedule. His services in "getting on with his work" was invaluable and proved to be something for deep consideration of future movements of GroPacs. It is firmly recommended that in all cases, that the Port Director, personnel, files and equipment; except buildings, decks, etc., be forwarded with the first movement.

(217) Experienced officer:

Be sure that there are adequate boats for port directors very early in the operation. _____ suggests that it be written in the Operations Plan that APAx and AKAx leave some boats to Port Director and not all to the boat pool. At _____ he said he should have had 10 boats by D/6, and about 16 boats by D/30. He suggested that to the extent the next Port Director operation stages in the forward area the Port Director LCIs be sent to _____ to train if they can get there early enough. He added that what a Port

Director needs in officers is "eager beaver" Ensigns, not rank-conscious Senior Lieutenants with little Port Director experience, which is what he has been receiving lately. The importance of Port Director work in the assault phase cannot be over-emphasized.

(218) Experienced port director:

Early in the operation it was found that CTG --- --- was not action or info addressee on many communications which directly or indirectly concerned Port Director Group, and that for efficient operation it was necessary for all traffic other than Top Secret, to be routed to Port Director Group. This was done and materially expedited action by Port Director Group when required.

(219) Experienced port director:

It is impossible to say too much about the efficient manner in which Port Director communications, including MERCO traffic, were handled by the staff of CTF ___. Without such efficient and complete communication service, the work of the Port Director Group in this operation would have been seriously handicapped if not crippled.

(220) Port director:

Reference (h) provided that two (2) copies of each ship's manifest would be airmailed to Port Director at the target.

When no ships' papers had been received after air mail had begun to arrive regularly at _____, CTG _____ sent dispatches to JOSCO, Pearl Harbor and ComFwdArea Guam stating that no copies of ships' papers had been received by air mail and requesting that they be forwarded, addressed to Port Director, Navy _____. Dispatch reply from ComFwdArea stated that in the future ships' papers, including those for the Port Director, had been sent to _____ Army for distribution. Inquiry at _____ Army failed to locate any ship's papers for Port Director.

An important part of Port Director's work in the early stages of any operation of this size is the dissemination of accurate, detailed information on the cargo and passengers aboard each ship as far in advance of arrival as practicable, to all interested commands and agencies.

(221) Experienced Port director:

To wait until a ship is in port before finding out what she has aboard is most unsatisfactory. To unload ships expeditiously and efficiently, copies of manifests and stowage plans should be in the hands of unloading authorities at least ten (10) days prior to each ship's arrival.

Failure to receive advance copies of papers for many ships which arrived during the early stages of this operation made it impossible for Port Director group to furnish unloading authorities with information they needed and seriously reduced the value and effectiveness of this phase of our work.

In the absence of advance copies of papers for a majority of the ships which arrived in the early stages of this operation, the only solution was to have boarding Officers pick up all copies of ships' papers on board and rush them ashore to Army unloading authorities by messenger.

(222) Experience Port Director:

"Four LCVP's per LCI used in the operation by Port Director Group be shipped in the assault echelon or definite provision for supplying four (4) such boats from a designated APA in the assault. It is further recommended that the canopies and deck platforms complete with hand rails similar to those supplied Port Director Group by COMSERVPAC in this operation be shipped aboard each LCI assigned to Port Director Group. These worked most satisfactorily in this operation and permitted boarding off shore in rather rough seas when such boarding would not have been possible from open boats. It is further recommended that one or more YTL's - 375 H.P. be sailed to the target in the first convoy arriving after D Day. Plane personnel and plane re-arming boats with Port Director units usually are supplied are useless for offshore work. They should not be shipped unless and until the Port Director reports that they can be used to advantage."

(223) Experienced Port Director:

"Prospective Port Director and selected members of his staff proceed to the target aboard the flagship of SOPA (Administrative.) The number of officers included in the initial Port Director Group will be governed by the size of the operation and the estimated duration of the assault phase. Minimum suggested requirements are Port Director, three (3) operations officers, one each Cargo Officer, Convoy and Routing Officer and Communications Officer with HERCO experience. Four yeoman should be included in the detail."

(224) Experienced Port Director:

"One or two LCI's fitted up as flagships be assigned Port Director Group and move to the target with the assault or not later than the first group of ships arriving after D Day. Whether more than one "floating Port Director Office" will be required in any operation depends on the number of anchorages or harbors involved in the operation. During the early stages of an operation mobility is a most important consideration. Obviously a floating Headquarters cannot be in more than one place at one time."

(225) Experienced Port Director:

"Approximately half the officers and one third the enlisted men in the permanent Port Director's office be embarked in the SOPA flagship and the LCI or LCI's combined. The advance contingent of the Port Director embarked in the LCI to be composed of Assistant Port Director, two or more Operations Officers, Convoy and Routing Officers, Boarding Officers, Communication Officers and Pilots. Enlisted complement of the LCI to include yeomen, boat crews and radio operators. Number of officers and men to be based on the volume of shipping involved in the movement and the number of anchorages of harbors to be used during the early stages of the operation."

"If more than one LCI is required, each to have a complete complement as above so that they can operate independently under the Commander, Port Director Group

(226) Experienced Port Director:

"LCI's assigned to Port Director Group be equipped with sufficient radio equipment to guard all circuits assigned to Port Director Group in the Communication Plan of the operation and that one or more sets of radio equipment for use on shore be carried aboard the LCI."

(227) Experienced Port Director:

"Port Director Group should be supplied with advance copies of all ship's papers available prior to departure for the target and that ships' papers arriving after departure of the Port Director Group be dispatched to the target by office messenger, addressed directly to Port Director Group."

(228) Conclusions of a group of Planning Officers:

"The Port Director should be a separate department head in the organization of naval advance base unit or base. This is necessary in order that his freedom of action can be maintained wherein immediate decisions can be made for the shipping present without interference of additional departmental channels. He should however make known information copies where necessary in cooperation with other departmental heads and his superiors."

(229) Experienced Port Director:

"It appears to be a mistake to have a Port Director depend on the Boat Pool for boats and crews. The demands on the pool exceedits capacity. They come from everybody and the Port Director is merely one more supplicant. For proper performance he should have his own boats and personnel and he needs LCVP's or something of that sort far more than he does plane re-arming or plane personnel boats which are pretty frail and no good in a swell. Pilots have to meet ships well outside and it takes something that is both rugged and seaworthy to do the job."

(230) Experienced Observer:

"Port Director found that he had to take on the additional job of being an information center. This was due to two reasons:

(1) Lack of a Fleet Service Center.
(2) His initial contact with the ships.

However, now that a Fleet Service Center is being established this should take a considerable load--in this respect--off the Port Director."

(231) Experienced Observer:

"Port Director's primary growl was lack of experienced personnel in the beginning. He stressed getting as experienced and as strong a man as possible for the Port Director Operations Section, which he considers primarily a one man Job:

(1) Gets all incoming dispatches--is first to see them.
(2) Lines up ETA's--daily and by time. Gives slate for what is coming in.
(3) Figures type ship and type cargo--assigns anchorage.
(4) Before arrivals gets berth data out of JLCP.
(5) Controls inter-harbor moves, keeps harbor pilot.

(232) Experienced Observer:

"Having Port Director geographically separated by almost a mile from the Commandant creates the need for two separate facilities. Port Director has almost as big a communications office as NOB Headquarters. Obviously a problem of authority over Port Director communications arises.

(233) Experienced Observer:

"Port Director stated that the telephone system presented a considerable handicap because there were eight exchanges and a great proportion of calls required connections through three or four exchanges. This presents the dual problem of getting clear through several exchanges as well as difficulties in hearing. Possibly this could be rectified by proper planning of circuits with respect to volume of traffic being tied into one exchange; in other words, if the Port Director has most of his telephone traffic with the Captain of the Yard, then these two sections should be tied in with the same exchange."

(234) Experienced Observer:

"Port Director operations maintains an ETA book showing the ships expected by days, unit designations, time of arrival, dispatch numbers. The ETA slate gives fueling and berthing assignments, and this information is passed to HECP. They like to use HECP, which gradually becomes a Port Director outpost. They keep a group of pilots at HECP and can pick up a ship four or five miles out if necessary. In the base signal tower they have spotters who keep track of ships in harbor all day long. Suggest a tower that can do this and has sufficient personnel for spotting. LCT's and similar craft are inclined to move about harbor without permission."

(235) Base History:

"When the B-4-B Component first set up its office, the senior officer present afloat (SOPA) of the Amphibious Task Force still controlled the discharge of cargo and the disembarkation of troops. The Port Director began his operations by assisting SOPA in that work and by acting as liaison between SOPA and the units ashore."

CARGO HANDLING FACILITIES

(236) From an Experienced Officer:

"Approximately 50% of all M1A, M7A, P12A and Medical gear was palletized. This cargo was handled many times and the handling of pallet loads became merely a machine operation. The pallet loads made for automatic segregation, so that break out of material was a simple matter. In handling loose boxes, half of the labor force was used to segregate supplies; then in breaking out, much labor is necessary to break down stacks for location and removal of the proper box or item. With pallets, the location in the stack is recorded by pallet number, and the break out is done by fork truck. Handling of pallet loads out of the ships and the subsequent transfers was shown to be more efficient in every way than loose cargo handling."

(237) From an Experienced Officer:

"Pallet operation is perfectly suited to this type of handling as it would provide ready-made crane loads for handling at the Transfer barge, greatly increasing tonnage capacity of the transfer operation. Beachmaster palletized cargo, of which there was a small amount."

(238) From an Experienced Officer:

"Cargo handling during early phases of an assault operation greatly improved through the use of unit pallet loads. Ammunition, water and rations are the bulk of the tonnage and are very adaptable to unit loads."

(239) From a Convoy Commodore:

"In order that you may have an idea of what I am "bumping" into, I will endeavor to give you a birds-eye view of unloading ships for this echelon."

"Daily at 1500 a conference is held ashore at the Beachmaster's tent near Purple Beach. The Beachmaster presides over this meeting of the representatives of the type commanders (LSM, LCT, Boat Pool, pontoon barges, etc.) and his representative who has previously attended a conference with army representatives who have lined up ships which are to have cargo removed during the next 24 hours. My representative, the staff cargo officer attends. I have attended two of these conferences. Each type commander representative is questioned as to the number of his type craft which are expected to be available during the next 24 hours and a table is made up consisting of all operating craft loaded or empty. The army list of ships to be unloaded is produced and the number of landing craft are assigned to each ship insofar as they will go with the proviso that some of these landing craft may not report because they are not unloaded and the army requests for more than are available. Each craft assigned to a specific ship goes to that ship only. In case a ship has more landing craft than it can handle, such craft lie off and await the time when it can find a space alongside. If a ship has loaded all boats allocated it for that day, it does not receive another boat until one or more of these have been unloaded and returned to that ship. On the other hand, a ship which has boats allocated to it which have not been unloaded on the beach must wait until the assigned boat does report alongside. Today, _____, the _____ had one boat report to her although there were 5 LCT's and 3 LSMs assigned, two LCTs would have completely unloaded this ship had they been available. The _____ had the following landing craft report to her: 2 LCTs, 2 LSMs, and 2 barges, but she had only 27 stevedores on board, the above landing craft could not be assigned elsewhere. Any request from me or my representative for change of assignment has been ignored."

(239) From a Convoy Commodore: (Cont'd)

"You cannot imagine how helpless I feel, seeing so many available landing craft in this vicinity with absolutely no means within my reach to get ships unloaded which are on the army priority list but which happen to be awaiting return of boats at the beach. This does not help the morale of my hatchtenders and winchmen on these ships. They cannot understand why I do not obtain landing craft for them as I have done in all previous operations. I regret to say that I feel that I am failing to accomplish what you and Admiral _____ expect me to do."

(240) From an Experienced Observer:

"Have plenty of your own men and unloading gear available to handle, guard, and protect machinery and equipment at the time it starts coming in."

(241) From a Base Commanding Officer:

"The "bottleneck" at this time was apparently caused by a lack of sufficient trucks to haul away the cargo from the ships."

(242) From an Experienced Officer:

"Organizations handling cargo over the beaches should be assigned to this function and not be subject to call for other duties. During the _____ campaign both men and equipment of the Southern beach Shore Parties were withdrawn or replaced with considerable frequency. The result was a loss of unloading efficiency and in conjunction with an embarrassing lack of rolling equipment the movement of cargo over the Southern _____ beaches generally lagged. Consequently ships were required to remain in the area much longer than necessary and landing craft were likewise subjected to damage on the rough coral. Naturally the ships were subjected to enemy attacks for longer periods and damage to landing craft created salvage problems and loss of the use of vital lighterage."

(243) From an Experienced Observer:

"Use of cargo nets was practiced to some extent in an attempt to apply the unit load principle; however, practically no time is saved by this method handling as the return of the empty cargo nets is as much a problem as the handling of the cargo ashore. Further, very little labor is saved, as nets must be loaded by hand at the ship and unloaded by hand at the dump."

(244) From an Experienced Officer:

"The Advanced Materials Handling Group arrived with the fourth echelon and were put to work immediately operating the supply dump. The equipment for this group was shipped from Port Hueneme and Oakland minus the Trackson Cranes which were key equipment in the dump operation. Fortunately, it was possible to borrow a few of these from CB units nearby. This lack of equipment could have been a serious handicap to dump operation."

(245) From an Experienced Officer:

"Companies C and D set up a common supply dump near the beach. As cargo came ashore, pallet loads were easily identified by the "4 diamond" brand adopted for Garrison Beach Battalions at Iroquois Point. Material being packed into large unit loads or pallet loads was not subject to loss due to pilferage or misrouting. On arrival at the supply dump, trucks and ducks were unloaded by means of the fork trucks, the material easily segregated and stacked according to its category (Component, Communication Gear and Camp

(245) From an Experienced Officer: (Cont'd)

"Equipment). A few men from the E-9 Unit were used as fork truck drivers and riggers. The supply dump site was chosen at a location central to both Companies, and issues of Camp Material were made immediately. The camps were quickly constructed and no labor was required from the organization except the few men mentioned above from the E-9 Unit, which had not begun to function as yet. No cargo was lost, assuring complete equipment for the camp and for the Beachmaster organization in their work."

(246) From an Experienced Officer:

"The Advanced Materials Handling Group, trained to construct and operate a supply dump under such emergency conditions, did not arrive until the fourth echelon, several weeks later. This group, part of the NSD, would have been invaluable had they arrived with the first or second echelons to begin immediately the construction of suitable Naval storage facilities, and to handle whatever cargo delivered to the beaches during the early phases."

(247) From an Experienced Officer:

"It is therefore recommended that the Advanced Materials Handling Group be included in future advanced base movement, but it be better trained and equipped. This should be divorced from the NSD until such time as the NSD begins to function. Until that time the group should be designated to operate supply dumps for handling Navy cargo, and for freight handling only. This group should land on the earliest possible echelon with all of their equipment, as their function begins before cargo is received in the construction of proper supply areas."

(248) From an Experienced Officer:

"At the target, this group did not arrive until the 4th echelon, about D plus 45, which was quite late into the operation from a Materials Handling standpoint. The group therefore missed the opportunity to be on the scene in time to construct proper supply dump facilities, and to handle initial cargo, which was a difficult problem due to lack of proper facilities. Much cargo was lost because there was not personnel to check beaches and to direct flow of cargo to the proper destination. Further, there was no available transportation to haul misrouted cargo, when located, to the NOB supply area."

(249) From an Experienced Officer:

"Cargo is segregated and stored in the supply area by type of material rather than by class, that is; Galley equipment, construction material, stores, tentage, etc. For component or organizational gear being held as a unit, no breakdown or segregation was attempted, and all of this material was stored in one place, with a complete check made upon receipt. With this organization the supply area operated efficiently and easily. This efficiency was reflected immediately on the speed of base development. On previous operations, having no early supply organization, supply dumps were a place to pile materials without regard to markings, producing an unintelligible accumulation of supplies, in which individual items became hopelessly lost. The result of this condition was retarded development and construction due to time lost searching for material, and work stoppages because of the inability to locate necessary materials. Having trained personnel with proper gear for handling cargo, demands for working parties on organizational personnel for this work is eliminated."

(250) From an Experienced Officer:

"Freight Handling. The freight handling problem is one which requires much more thought. This officer is the officer who accomplishes the mission of the base. Accordingly, he should be picked for his force and judgment, ability to get along with people, ability to coordinate and ability to make friends. The job is much too big for a man who has been many years working up to freight superintendent on an established line. He can handle the job (1) if given all the men he wants, (2) if he is given all the equipment he wants. Accordingly, I recommend a tough but just Navy career officer be assigned this job. He must have a reputation for being able to get things done and must be able to take the advice of his assistant. As an executive assistant I recommend the choosing of a stevedore superintendent who has the know-how to complement the commanding officers. These officers should be together from the first and should be assisted by a good responsible officer who will take care of the personnel problem. Each ton of cargo handled per day will require approximately .64 men. This includes administrative and up-keep personnel. Freight handling of 50,000 tons per day will require approximately 32,000 men if done under the present system of unloading in the stream. This batch of men is manifestly impossible to support and it is by the use of piers that the number of men can be reduced. It will take approximately .30 men per ton of cargo to handle alongside the pier using trucks to the dump. Accordingly, I recommend that on the next expedition one group of pier builders be sent in with all the necessary gear to construct piers Immediately. It is necessary that the piers be constructed prior to the actual construction of airfields for bombing work in order that when the bombing does start, material can be gotten to the bombers."

FLEET SERVICE UNIT

(251) Experienced Observer:

"The idea of the Fleet Service Unit is to act as liaison between fleet commanding officers, and various NOB departments. Furthermore their objective is to explain the capacity of the NOB (as well as the NSD) in servicing the needs of a fleet activity, to guide such services, to solicit requisitions, to take these requisitions to the proper individuals, and to see that material is delivered to ships in time to meet their needs."

(252) Experienced Observer:

"A full commander -- a line officer -- was placed in charge of this activity when it was set up several weeks ago. This was a very interesting organization to us because it was along lines suggested a few months previously -- and based on a comparable industrial sales organization Customer Relations Unit. Officer-in-Charge reports directly to ComNOB (we think this an interesting idea because of the added prestige given to this unit)."

(253) Experienced Officer:

"It is contended that such a unit, staffed with supply, ammunition, ordnance officers and others as needed, under the direction of a line officer, reporting directly to ComNOB, can do a tremendous job and effect considerable saving of the fleet representatives' time. It should increase efficiency and make for faster turn around of ships. Time of the NOB people would be saved. Last and perhaps most important, would give management a check on the "esprit de corps" and service of the various activities supporting the Fleet."

(254) Experienced Officer:

"On large groups of ships most important is liaison ahead of time. Best if you can get advance dispatch information. The biggest trouble with ships is getting them to be ready to receive on time with their boat pools and working parties. NSD has found that a supply officer coming ashore may well have more interest in the officer's club. (Possibly a well organized Fleet Service Unit is the answer.)"

(255) Experienced Officer:

"A wrinkle they use is that if any escorts are coming with convoys they try to have the fuel officer get fueling assignments and have fueling and berthing message out to HECP to pass on.

(256) Experienced Officer:

"It is the efficiency of this information group that creates good feeling between people outside of the base and the base itself, and the reputation of the base is made by the reception given Joe Doakes of the U.S. Army, who wants to see his brother, Jim Doakes on a tug boat in the harbor. When this meeting is arranged for, the Army thinks that the Navy base is a hell of a good spot. Word gets to the Island Commander, and the way is smoothed for real Navy work, (This is an actual case)."

(257) Experienced Officer:

"It will require an average of fifteeen minutes for a fleet Representative Interview. It is estimated that it will require two men answering questions and advising, two men typing, and one man on the telephone and files. It is also estimated a follow up section of four men will be required, and two drivers will be required. A total personnel of sixteen is called for (day shift of fourteen and night shift of two)."

"It will also be the function of this unit to help in providing information on material needed not handled by NSD."

(258) Experienced Officer:

"It is planned that the Fleet Service Officer shall provide boarding officers who will call on each ship as soon as it enters port. He will explain to the supply or executive officer the following:

(a) Operation and location of the NSD and NOB divisions.
(b) Form and preparation of requisitions.
(c) Types and quantities of GSC, SS, and C&SS.
(d) Procedure for requisitioning.
(e) Types of services.
(f) Urgent requisitions.
(g) Delivery.
(h) Disbursing.

On completion of the interview the boarding officer will return to Headquarters and set in motion the requisitions.

(259) Experienced Observer:

"A particularly good information booklet has been designed by the Fleet Service Office. Its size is small like a handbook. The booklet's index is alphabetical; so it is easy to find descriptions of any function. (This type manual is far superior to others we have seen which fulfill a similar need. Other manuals are indexed according to departments and not according to functional items. This makes them difficult to use). The write-up for each section is simple and uninvolved. The entire form and make-up of this pamphlet is designed for easy and convenient use. Maps are included showing locations."

A copy of this manual is left on a ship by the boarding officer.

(260) Experienced Observer:

"Ten percent of the requisitions will not be submitted properly or will be received verbally. Proper forms and typing will be done at Fleet Servicing Unit headquarters."

(261) Experienced Officer:

"A file is being set up to number all requisitions received and cross reference for each ship. In conjunction, a blackboard will be maintained showing ship names and promised time of delivery."

(262) Experienced Officer:

"The follow-up section will maintain an index and see to it that all requisitions are cleared through in the shortest possible time. This will be done by personal follow-up if necessary. The follow-up section will also keep itself informed of the location of each ship."

SANITATION AND MEDICAL

(263)Experienced Officer:

"The importance of sanitation cannot be too strongly stressed. In the early days many camps had from 25 to 50% dysentary cases. Prefabricated screened heads and prefabricated mess sterilization units should be top loaded. It was noted that the airplane spraying of DDT worked wonders. It is essential that adequate disinfectants, Freonbombs, and screening be immediately available

(264) Official History:

"The remainder of the doctors landed _____, under the able direction of Comdr. _____(MC) USNR. A vigorous program to eliminate flies and mosquitoes was instituted immediately. Chemicals and insecticides were soon available and the program progressed satisfactorily. Dengue fever, dysentery, and bacterial food poisoning were very prevalent during the early days. The island program was under the direction of the Island Sanitation Officer. Under this organization were seamen who were assigned to sanitary squads supervised by doctors and corpsmen in each unit on the island. Japanese cisterns, all open water containers and other breeding places for mosquitoes were systemmatically destroyed. DDT and penite, as soon as available, were extensively used for insect control."

(265) From Official History Of A Ship Repair Unit:

"Lost time will be avoided and better care will be assured personnel if a dispensary is supplied in the industrial area; for large activities this dispensary should be equipped and staffed for supervising industrial safety and industrial hygiene as well as taking care of accidents and routine casualties. For all repair activities, whatever size, a dispensary should be provided in the shop area. The April 1945 Outfitting Lists at present make no such provision."

(266) Official Report:

" Fungus infections are a nasty and prevalent disease at advanced bases. Make certain that all water (drinking and bathing) is chlorinated at the time it is used. Chlorine is a gas and at the hot temperatures in the tropic will "safe" your water for only relatively short periods. Water that has been standing in a tank over two days should be re-chlorinated with calcium hypochlorite before using. Check with your doctor on this."

(267) From Official Report:

"Training by experienced instructors at the staging area is of the utmost value. All officers ought to be indoctrinated in the necessity of sanitation and the men thoroughly trained in the care and cleaning of heads and messing areas. Special attention should be given these two very important functions and if the officers do not know how such cleaning can be accomplished, they will not be in a position to teach the men should the necessity arise. Messing the first few days ashore is a difficult thing to perform in a clean way, yet cleanliness must be insisted upon lest the ubiquitous fly gain uncontrollable advantage."

"A sanitation detail consisting of at least 10 men is essential and should be already in force while aboard the transport. Keep the key men in this detail and replace the men one at a time in order to maintain the constant vigil against disease that is necessary. Make sure they are trained in the latest methods of sanitation. The unit's doctor will be a great aid in an advisory capacity. Have him instruct the detail when necessary."

(268) Experienced Observer:

"They find it difficult to control trash piles. Many, particularly CB camps, would drop trash any place away from their own camp, especially at night. This practice should be anticipated and regulations issued and enforced."

(269) Experienced Observer:

"For some time they had trouble in enforcing sanitation rules. Screen doors opened inwards instead of out and were frequently left open, roads and paths were put in without culverts, heads were not properly screened, nor fly proofed, pit latrines were used when septic tanks should have been used (the use of flush latrines is urged) mess gear not properly sterilized, camps built on low ground when high ground was available, space below tents found to be concave instead of convex, vehicles driving off roads leaving ruts as breeding places for mosquitoes."

(270) Official Report:

"The health of the personnel was excellent after the first few weeks of DDT spraying, which practically eliminated all flies from the island."

(271) Observer:

"A good arrangement has been made for burning garbage by constructing a 200' square of dirt alongside the road--on the same level. The edge of this platform drops down about 25' to another platform of Marsten mats. Underneath the Marsten mats there was an open space about six feet high."

(272)

"Permanent latrines should be built early at permanent bases.

(273) Experienced Commanding Officer:

"We have just completed setting up Command Headquarters opposite Black Beach on the eastern side of the island, and I want to send you a brief letter thanking you for your thoughtfulness in providing the eye shields, and the gauze face shields. The dust has been terrific, and is very irritating to the lips and skin, and many men have suffered with infection as a result.

(274) Experienced Observer:

"The GS dispensary is located in a very poor position, right on the main four-lane highway. There is constant traffic day and night, heavy vehicles, dirt, fumes and jarring. Furthermore patients from several of the wards have to walk to another ward in order to use the head. The route is not covered, and during frequent rains patients get wet."

It would seem to be desirable to have heads and showers in each ward, and covered passageways."

(275) Experienced Officer:

"One hospital arrived complete with clothes in suitcases and not a blanket in the crowd. They arrived on D plus 32 days. They were attacked the first night ashore and killed three Japs and had two of their own men wounded."

(276) Official History:

"Pharmacist Mate 1st class Cody, from one of our G-10 units accompanied the Beach Party ashore on D plus 7, and was kept busy on the beach attending to minor bruises and injuries. This unit strongly recommends that for future operations that at least one G-10 component, consisting of one medical officer, and three corpsmen be attached to the assault echelon."

(277) Officer-in-Charge of GBP:

"Regardless of the size of the GBP sent ashore, particularly if it is the early stages of the assault, it is recommended that a Medical Officer accompany the Party. This Medical Officer should be equipped with the same medical gear as the Assault Beach Party."

(278)

"It is noted that the initial fresh water supply in 5 gallon containers spoiled enroute making refilling necessary aboard ship. Water stored in 50 gallon drums was not affected. It is suggested that water be periodically inspected enroute to destination."

COMMUNICATIONS

(279) From an official history:

"A Communication Officer should be assigned during the planning stage. Large numbers of despatches must be handled with poor communication facilities. Without a Communication Officer, time of senior officers is necessarily diverted from other more important duties."

(280) O-in-C Garrison Beach Party:

"One of the chief problems in getting started was the fact that we had very little information concerning the frequencies, call signs, and code names of ships and activities involved. Therefore all sets had to be set up and tuned after arrival on the beach. It is recommended that the Communication Officer be given full information to this effect before leaving the staging area."

(281) Experienced Observer:

"IsCom ordered all teletypes and men to the Joint Communication Center, leaving no communication personnel at NOB other than in the Port Director department. Later on one officer was returned, but no men. The Legal officer was made Communication officer and they started to try and set up a message center. Three weeks later they got teletypes from IsCom and tied in."

"Eventually by scrambling around they found a signalman, a yeoman and a seaman and put them on the teletype work."

(282) Experienced Observer:

"Com Unit ...although attached to NOB, was put right in with the JCC and NOB had to build housing for them. Later the unit was detached from NOB and made part of the JCC.

(283) Experienced Observer:

"Message Center is handling possibly 12,000 messages per month and is still under-staffed. Be sure to get enough communicators to have at least one communications officer for NSD and one for Ship Repair and an officer for any other activity that may have lots of traffic. They had a headache at NSD without a communicator and they are now having the same trouble with Industrial (Repair) Department."

"Be sure and get orders in early for enough teletype paper."

(284) Experienced Observer:

"They are putting in TDO (ultra high frequency) to clear up the harbor warning circuit. They are getting SCR 610's for tugs, YO's; ABSD will also use this for their tugs."

(285) Experienced Observer:

"Officer-in-Charge of communications at Port Director, presumably comes under both Port Director and NOB communications. He briefs convoys, guards harbor warning circuit. He used harbor circuit to contact tugs, YO's and picket boats. CW is not much good."

(286) Experienced Observer:

"Be sure to have Port Director tower big enough to hold all possible teletypes and men needed and be sure to get color filters or have them made. They seem to be scarce. Be sure to have enough lines to tower. Suggest putting two officers from the Captain of the Yard on the tower to send out garbage, water, boats, etc."

(287) Experienced Observer:

"Since those days, communications at NOB have built up tremendously. They found they could not depend on teletypes for alerts (take as much as five minutes); so they got a Helicrafter from Welfare and Recreation for the 2716 warning circuit."

(288) Experienced Observer:

"Telephonic communications for fuel dumps and tank farms are urgent as you have to be able to shut off fuel lines in a hurry in case of fire."

(289) Experienced Observer:

"IsCom put in all wire lines and there apparently was a failure in overall planning in that there are not enough positions for all Army and Navy activities in the area. Thousand of hours are lost trying to get a line to get to the other end of the island you have to go through at least three exchanges."

(290) Base History:

"Transfer of personnel between JCC and Naval Base were made from time to time as necessity arose. This organization permitted a certain fluidity of personnel which would not have been the case had the section been separate and apart from the component, and it permitted replacement of both officer and enlisted personnel informally and on short notice."

(291) Base History:

"The personnel of the Communication Unit of the GroPac were divided between JCC and the landing force shore party for the assault phase of the operation. Considerable damage was done to equipment because of the excess re handling of cargo under stress."

GARRISON BEACH PARTIES.

(293) Report of Officer in Charge Garrison Beach Party:

"E-9 Small Boat Repair Unit: This will give the picture as to how this Unit went into "high gear" 19 April - Hit the beach and dug in. Installed and operated 150 gal. distillation unit with two 300 gal. and one 3000 gal. canvas tanks. Unloaded G.B.P. equipment and supplied drivers for vehicles. 20 April - Unloaded gear, put vans in operation, installed 3 screws and 2 cutless bearings and operated distiller. 21 April - Moved to new location where beach was ideal for beaching small boats. Volume of repairs increased. 22 April - Installed two screws, replaced one shaft, operated distiller. 23 April - Installed two screws, two shafts and two cutless bearings. From then on there has been a continuous stream of small boats in for repairs with the result that the unit is working day and night to keep up with the work. To date 68 small boats have been repaired."

(294) Official Report:

"D Plus 6 Day. Priority heavy equipment was in operation. Orders were received from the Commodore for the Garrison Beach Party to officially take over at 1500 and a message was received commending the Beach Parties for the smooth transition. The Assault Beach Parties departed that night."

(295) Report from an Officer in Charge:

"At 0610 ____ this group disembarked from the APA ___ at anchor _____ and were transported in an LCM, with all communication gear, to the target, distance ten miles. Stops were made at AP ___, Commodore _____ Flagship, where a few of the frequencies we could use were picked up and Lt.Comdr. ____ came aboard the LCM to direct us to the beach. We passed by the Force Beachmaster's boat to acquaint Lt. Comdr. ____ of the fact that the Garrison Beach Party was going ashore. We arrived at Red Four beach at 1000 on W plus 2 day. The beach was congested, supplies were piled high, space was at a premium. The Army was having difficulty moving supplies from the beach to dumps because of sniper and mortar fire and the proximity of the front lines, which varied from 250 yds. to 480 yds. over the brow of the embankment protecting the beach. We piled our equipment and gear on the beach and dug in. The Officer in Charge and the Communication Officer went off to make the necessary contacts with the Shore Party Commander, Lt. Col. _____, and with the Transport Group Beachmaster, Lt. Comdr. _____. These officers were extremely busy, the assault was in a critical stage, assault shipping was of primary importance, the front lines were in need of supplies and they were making every effort to avoid delay in getting them off the beach. The fact is that they did not have time to sit down with us and plan with us to the point of our taking over but we arranged to put our radio men and B-4D men on watch with the Beach Party man and to stand by to assist in every way. In the meantime we were breaking out our radio gear and blinker lights in order to be ready to get up parallel lines of communication. That night was hectic with constant shelling of the enemy in their caves at the foot of and on _____, with our tanks firing from the brow of the embankment overlooking the beach and with infiltration of the enemy, several of whom were killed not more than 15 feet from the embankment at the foot of which we dug in. Casualties were heavy, a constant stream being evacuated over the beaches."

(296) Report of Officer in Charge:

"The C.B. unit had adequate personnel to operate all the heavy equipment assigned to the G.B.P., until four additional bulldozers were obtained from

the pontoon causeway company. Additional operators were obtained from the Boat Pool."

(297) Report of a GroPac Commanding Officer:

"Our bomb disposal unit did an outstanding job. It was a herculean task, and while they were set up ostensibly to cover the GroPac area, their services were in constant demand for many units in emergency cases to inspect and make safe duds in areas which were badly needed. I would suggest an augmented unit for the assault echelon."

(298) Report from an Officer in Charge:

"After being stranded on a coral reef for two hours in an LCT the rest of the personnel of the Garrison Beach Party arrived on shore at 1800. Every one dug in for the night on the slope of the embankment below the schoolhouse and the beach in front of us was taken over as the point to unload our equipment and supplies. Here we worked to a late hour unloading the equipment and supplies that had been sent in with the personnel. Most of it had to be manhandled, the army could provide no trucks or LVT's for us. Our distillation unit was set up and operating that night, our E-9 vans were set up, our tractor cranes were put to work. A small field kitchen on the beach was in operation and the doctor set up a small first aid station. It was necessary to bring Lt. _____ Security Officer, GroPac _____ and 16 men ashore to augment our perimeter guard for the night as there was nothing between us and the Japs on our right flank. Shells passed over our heads all night as the Army and some naval units continued to pound enemy positions on and around _____ _____ island approximately a half mile from our position."

(299) Report from an Officer in Charge:

"The B-4D component was much too small to handle the number of beaches they were required to operate at one time. Officers and men were drawn from the Port Director, Boat Pool, N-1A, N-3A and the E-9 to assist the B-4D. Boat Repair personnel were utilized while all boat repairs were made on the LSDs and until the GroPac furnished replacements upon arrival of the first echelon."

(300) Official History:

"At the request of Captain _____, Senior Beach Master, a detachment of 25 SeaBees from the _____ N.O.B. was detailed in the charge of Lt. _____ of the _____ N.O.B. and attached to the assault beach party. Everyone of those men were capable of operating any type of heavy equipment such as bulldozers, cranes, etc. Lt. _____ landed on D plus 5 and on D plus 7 had transferred to the beach all of his men and equipment. From that date on they rendered invaluable service on the beaches and have been commended by officers of various services and units for their versatility and application to the job on hand.

(301) Report from an Officer in Charge:

"Construction Battalion Detachment: This unit is indispensable to a Garrison Beach Party. The C.B. Officer and his men worked day and night with their cherrypickers, Ensley crane and bulldozers on the beach and in the dumps, leveled ground and performed the countless odd jobs which they were constantly called on to do. It is recommended that the C. B. Detachment be made up of casual SeaBees instead of a Detachment which reverts back to the Garrison C.B. Battalion because of their specialized experience gained in this type of operation."

(302) Report from Officer in Charge:

"It is recommended that it be emphasized in the Advanced Base Doctrine that a Control Boat be made available to the Garrison Beach Party in order to continue the work of the Assault Beach Parties without interruption. It is suggested that a Picket boat or some other small boat be made a part of B-4D equipment, such boat could then be turned over to the Port Director or Boat Pool as part of the permanent force, upon withdrawal of Garrison Beach Party."

(303) Report from Officer in Charge:

"J-4A and J-4B Bomb and Mine Disposal: The work of those units has been highly important and has been most satisfactory on this operation. Our final recommendation is that the earlier a Garrison Beach Party can be put ashore the better for all concerned."

(304) Report of Officer in Charge:

"Flexibility of organization is of paramount importance so that unforeseen circumstances in the field can be met without loss of efficiency in accomplishment of the beach party's mission. It must be possible to break off small self sustaining units for beach operation without detracting from the Battalion's ability to function. At the same time men and equipment should be provided so that control of operations at the Battalion level can be exercised if necessary."

(305) Report of Officer in Charge:

"It is strongly recommended that the disposition of a Garrison Beach Battalion be included in the Amphibious Operation Order. The Beach Battalions are integral links in the chain of events during the assault on the target and a clear understanding of its part in the assault should be covered."

FIRE PROTECTION.

(306) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 26 December 1944:

"Water Supply: A very serious lack of water for fire protection purposes is evident on the Island. In fact, only at the new Cincpoa headquarters does there appear to be any reasonable water supply system consisting of underground mains and hydrants provided. Such vital storage areas as the N.S.D., Marine Field Depot, N.O.B., and Tank Farms are without any water supply whatsoever. Protection is mainly provided by water buckets or small capacity tanks."

(307) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 28 December 1944:

"A pontoon cell and small portable pump, truck mounted, furnishes an ideal means of providing a small quantity of water for fire purposes."

"Pontoon cells filled with water and provided with small capacity pumps have been improvised. Water tanks have been provided at strategic locations. Empty drums have been converted into water containers and located throughout housing areas."

(308) Conf. Ltr from Party Studying Fire Protection at Advanced Bases to Cincpac dated 28 December 1944:

"It is considered of paramount importance that base regulations covering fire prevention and fire protection be promulgated; that a standard fire bill be published and that strict fire prevention discipline be insisted upon."

(309) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 28 December 1944:

"A considerable measure of protection can be provided immediately for incipient fires by locating 55 gallon drums filled with water, and pails near each entrance to a building, tent, hut, etc., and also on piers."

(310) Conf. Ltr from Party Studying Fire Protection Conditions in Advanced Bases to Cincpac dated 4 January 1945:

"Provision should be made in the Fire Bill, and fueling practice should require that the tank with the lowest elevation should be worked first so as to provide a reservoir into which fuel below the fire level of any tank involved by fire could be retained. Such a practice should salvage from 50 to 75% of the fuel below the fire."

(311) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 1 February 1945:

"These outstanding deficiencies include: lack of centralized organization; lack of qualified fire protection personnel; absence of pools of fire fighting gear, particularly the P-12 components; improper drum storage of gasoline; lack of safeguards for tank farm installations; too long a lead time between beach landings and the delivery of fire fighting components; and components and fire fighting personnel not arriving at a base simultaneously as a unit."

(312) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 1 February 1945:

"In checking the fire records at Advanced Bases, it was very apparent that grass and brush fires were most prevalent. Fire in grass and brush, particularly under high wind conditions, may seriously expose and involve ammunition dumps, gasoline drum storage areas and tank farms. In order to prevent this, all grass and brush in and adjacent to such areas should be cut and, where possible, the ground should be ploughed at regular intervals to keep the growth of vegetation to a minimum. The fire protection forces at the base should be familiar with the approved methods of handling grass and brush fires, and should see that fire fighting equipment is strategically located to handle such fires."

"Attention is invited to the importance of keeping areas surrounding ammunition dumps free and clear of grass, shrubbery and growth which might support fire and spread it through an area."

(313) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 1 February 1945.

"In the event of fire in one unit, the clearance alone would not be sufficient to prevent the fire from spreading to the remainder of the storage, particularly that located downwind or downhill, because of the tremendous heat radiated by burning gasoline. In order to limit the extent of any gasoline drum storage fire, it is recommended that earthen berms or dikes be provided around each pile or unit of drums. Fire prevention regulations should prohibit the piling of drums to reasonable opportunity to confine a fire to the contents

within a single enclosure. It is suggested as a practical solution that, prior to the storage of the drums, the use of bulldozers be employed to scoop our depressions and utilize the earth so removed to form berms."

"At practically every Advanced Base, there are quantities of gasoline stored in drums. The amounts so stored vary from moderate to very large. It was found that invariably an effort was made to segregate this drum storage into units, separating each unit by clear spaces averaging about 50 feet. Some of these units contained a very excessive number of drums. No berms or dikes were provided between the individual units."

"The conditions surrounding tank farm installations was found to range from poor to fair. The following defects were most apparent:

(a) Absence of berms.
(b) Two or more tanks within a common berm.
(c) Shut-off valves located within the berm or the absence of shut-off valves in the product line outside the berm.
(d) Absence of any fire-fighting equipment or material.
(e) Lack of, or inadequate water supply for fire fighting."

(314) Letter from a Base Commanding Officer:

"Safe wiring is essential in wooden barracks. After the two disastrous barracks fires at Argentia, New Foundland, all of us should be convinced that money invested in safe-wiring is a good investment."

(315) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 1 February 1945.

"Fire is a vital factor in the war, and the necessity of protection against fire damage becomes more important as operations proceed further west and further north within range of land based enemy aircraft."

(316) Conf. Ltr. from Party Studying Fire Protection at Advanced Bases to Cincpac dated 1 February 1945.

"The value of combat fire teams accompanying assault forces has been clearly demonstrated."

SUPPLY AND SUPPLY DEPOTS.

(317) From an Official History:

"As it is difficult, during the initial stages of an Advanced Base, for many activities to maintain accurate records of material on hand and material arriving, it will be found advantageous to permanently station a representative, such as a storekeeper, in each large dump, such as the Naval Supply Depot Dump, the Advanced Base Construction Dump, etc. The representative, knowing what items are desired by the Ship Repair Unit, and being familiar with material on hand, is invaluable. Frequently at an Advanced Base work is delayed for lack of material, not because the material is not available somewhere, but because the activity requiring it does not know where it can be located."

(318) From an Official History:

"Inspection of other Advanced Bases and reports on file at the Advanced Base Section definitely showed that improper storage of material after unloading was a detriment to efficient operation. Material was stored indiscriminately in large masses and to find a particular item was equivalent to hunting for a needle in a haystack. Furthermore, by not selecting a site for a dump which would not have to be used later for another purpose it became necessary to handle and rehandle the material several times.

Accordingly, a site was selected which would not have to be subsequently changed and a detailed layout drawn up which indicated where each item was to be stored. The layout of the dump further provided for ready access by crane, truck, or cherry picker to each item, thus eliminating necessity for preliminary moving of other items to obtain the desired one. In selecting a dump, a liberal area should be chosen to permit future expansion.

In areas such as _____ where there is considerable rain and where mud is one of the worst problems, the dump area should be provided with drains. The dump area, including access roads for trucks and cranes, should also be covered with Marston landing mat (as used on air fields). With this matting the stores do not sink into the mud, and handling of material is not stopped during muddy weather, which would otherwise make these roads impassable. I estimate that dump operations were improved by 40% by the use of Marston matting. As Advanced Base construction is largely dependent on ready availability of material the importance of orderly dump layout and covering with matting cannot be overemphasized."

(319) From an Experienced Officer:

"As this dump was constructed to receive all Navy cargo shipped into this side of the island, several N-1A, P-12A, N-7A and B-4F Components and Special Augmented Hospitals were received while this work was in progress. The N-1A components were broken out and the material used in camp construction nearly as fast as it was received. The other components and organizational gear were held until the consignees were ready to start construction, then reshipped. It was noted that nearly 50% of this cargo was palletized; some at Clearfield and some at Oakland, greatly reducing the amount of labor and time necessary in handling, storing and reshipping this material. Some lumber was received strapped in unit loads, making lumber handling a simple operation. Unstrapped lumber requires much time and manpower to unload from trucks, segregate, stack and store in the supply dump."

(320) Report from Experienced Officer:

"A small building was constructed as a rigging loft and bos'n locker. Another for equipment service shack. A generator was installed behind the Bos'n locker and light strings rigged for dump lighting. Several trees were left standing to serve as light poles. Three additional light towers, 20' high, were constructed mounting 4 to 6 flood lights. These towers were built on skids and were easily dragged to the proper location by fork truck. This made available ample flood lighting for all parts of the area."

(321) From Supply Officer in Charge of a Supply Depot:

"By reference (a), NSD _____ was requested to advise Commander Service Force, Pacific Fleet, at the end of six months regarding the value of palletized cargo in connection with the handling of materials so shipped.

It is desired to point out that during the early months of this year when shipments were arriving unpalletized, this depot was handling incoming tonnage of approximately 950 tons during a 24-hour period. As more and more cargo arrived palletized, this figure increased, until it reached a peak load of 3900 tons daily during the month of July.

Records show that run-around time in trucks delivering material decreased because of ease of unloading such that in April, one truck averaging 2½ trips per 24-hour period, had stepped up to four daily trips in July. In other words, during the month of April, 317 trucks were employed on a daily average of 950 tons and in July only 428 trucks were required to move 3900 tons.

In addition, the ease with which stores were segregated and dispatched within the depot reduced tremendously the congestion previously experienced at the receiving point. Had this material not been palletized, the delay in sorting and segregating would have been so great as to have impaired seriously the ability of this port to turn around cargo vessels."

(322) Official Report:

"Supplies will be coming ashore. A detail assigned by the Executive Officer will unload and stack the material, but it is a good idea to clear an area immediately so that an orderly depot can be established. Have the Storekeepers make a chart of it. This will save time and labor at the present and also later. See that dunnage and proper covering is given to all supplies requiring it. Establish it in a spot where you probably will not build."

(323) Extracts from Letters from The Commanding Officers of Ships Concerning a Pacific Naval Supply Depot:

"This ship arrived at Navy ____ on short notice for a brief period to discharge remnants. The ship was in urgent need for supplies, certain of which were very difficult items to procure.

The assistance and cooperation offered in these matters at NSD were striking. Not only was service quick and efficient, but the attitude of all hands encountered was - in a word - affirmative. The willing and helpful manner in which business was transacted is most appreciated.

This ship has cause to thank your "Can-do" activity."

GUAM

1st Ind.

"The Commanding Officer concurs wholeheartedly with the sentiments of the Supply Officer".

"The service rendered to this vessel by NSD ____ has been outstanding in the wide range of stores available, and the remarkable efficiency and splendid spirit of cooperation in which they were issued. It has been noticed that both in the administration building and in the warehouses, every possible effort is made to fill every single item of a requisition - no matter how much research or extra work is involved; that the spirit of "Can-do" prevails throughout the organization; that no catalogues or boxes are left unturned by your men to meet completely a ship's sailing requirements.

To give a typical example of the service received, I would cite my own experience with one of your storekeepers. I had come ashore early the first day with a bundle of requisitions which I brought to the administration building and delivered to the storekeeper at the counter. (After months of this routine one gradually develops a resigned attitude of Asiatic patience

which steels you for a score of "NIS's", many bored recitals of excuses and stock answer to all your questions, scornful disclaimers of all knowledge not strictly required of the rating, a few routine growls, and the gloomy prediction: "You can come back in a couple of days but I don't think you'll be able to get much of this stuff"). You can imagine my pleasant surprise when the storekeeper took my requisitions in the manner of a businessman receiving his salesman's orders, quickly set about checking up on all questionable items and either found them or told me exactly where I could get them. Then he fully answered all my questions, volunteered other useful information, wrote up several requisitions on special items, sorted them, told me where to pick up my trucks, and that the requisitions would be ready in twenty minutes! By the middle of that afternoon we had stores aboard that we hadn't been able to get hold of for months before."

"In the past nineteen months, I have received stores from nearly all sources of supply in both the Continental Limits and the forward area in the Pacific. Although the services performed by other Supply Activities has been commendable, none have displayed the whole hearted cooperation we received from NSD _____."

This marks the first time this ship has received a well balanced load of stores in the forward area, particularly GSK Stores. This is all the more amazing when I think of the trip I made ashore shortly after D day less than a year ago, and saw a pile of stores which I was informed was the beginning of NSD _____.

I wish you would extend to all hands my congratulations and appreciation for the job performed on the _____ and that I shall look forward to visiting your depot at a later date."

(324) Report from a Supply Officer in Charge:

"With the large quantities of material which we handle, mechanization is imperative. I would estimate conservatively that six times as many men would be required if we did not have the proper stores handling equipment."

(325) Experienced Observer:

"They suggest constructing some receiving and sorting sheds with decks truck floor level and making sheds approachable from all sides. They also suggest constructing platforms at docks at truck level. They have a problem in warehouse design in that they can get only one truck unloaded at a time. This causes line-up when you get all one type of stuff coming in at one time."

(326) Experienced Observer:

"If you can start NSD buildings in many places at once--for GSK, provisions, ships services, and clothing and small stores (the last two are combined as accountable stores at ___) you will save much moving around later. This is the same principle as not mixing in SPDC, Class 16 material pool, and ordnance parts pool with other Depot activities. At ____ they have spread the warehouses and using as much space outside houses as inside -- exclusive of roads, so that they can get open storage for related items. In lay-out watch warehouse placement in terms of traffic efficiency."

(327) Observers Report:

"To handle small "retail business", NSD has set up what they claim to be the only operation of its kind, and looks to us like an excellent idea. They have three 40' x 100' quonsets grouped together and joined to a 50' x 50'

double deck frame building. In this they run the retail section of NSD and stock those small items which are most often called for. They figure that as much as 80% of all requests are handled with this one small office, and with efficiency. It keeps officers from running all over the Depot picking up small unrelated items."

(328) Observers Report:

"They think it best to have material unloaders attached to NSD unload at warehouses, keeping strange personnel out of the warehouses. This makes for proper storing. It also lessens the great problem of uneven labor loads in allocating personnel out of pools. In receiving and storing they suggest a system to be set up so that truck loads can be taken directly to one warehouse, providing that truck material is for that warehouse. This saves double handling."

"Imperative to have cargo handlers closely allied with NSD. Spread cargo unloading over various types to avoid piling up trucks at one warehouse when unloading. Cargo people should keep NSD informed, consult with, and agree on what cargo ships can receive best. You can't ignore receiving people in achieving most effective loading on to ships.

NSD takes over cargo at dock and carries to the dock".

(329) Observers Report:

"As a result gas here to be rationed. The IsCom controls all issues of oxygen and acetylene which are both critical. I can safely state that if the two trailers plus the acetylene plant had been sent as we planned, there would have been no problems. Please stress with our planners that productive capacity must be gotten in early at D-plus 30. SeaBees, Army Engineers, Aviation, and Medics will all attest to this."

(330) Observers Report on Compressed Gases:

"The record of the plant here has been terrific. Every man has really pitched in and I do not think a better job has been done on the island. The set-up is as good as the Navy Yard. There is a loading dock made out of timbers salvaged from a wrecked sugar mill. Spares are stored under shelter and everything is ship-shape. Everyone was amazed at the speed in which they got it going. Here is the record:

Landed	1630 - 5 May
At plant site	1400 - 6 May
Started	1800 - 6 May
In production	2300 - 6 May
Production	7 - 31 May -- 1,576 cylinders

I do not see how the above can be beaten. The boys keep her running through air raids as production is so badly needed."

(331) Observers Report:

"Material Recovery Unit should come in early and should be made an integral part of NSD, not an annex. When MRU showed at --- they had the only maintainence equipment on the depot and the only welding apparatus. MRU is going to set up a department to scratch around and collect all the used and unidentified material which is lying around in great quantity at NSD and the base and put this material into stock."

(332) Official Report:

"The early days indicated that a material recovery unit could be desirably used here. ComServPac ordered MRU ____ for duty here, but unfortunately their arrival was too late to salvage much material on the beaches."

(333) Observers Report:

"When ships store materials were first brought in . . . . they were robbed blind. They had no warning on arrivals, invoices were brought in and no one knew where the material was. They scoured the island and finally surveyed about $5,000 worth of stock. Ship stores men were in mud up to their knees and were laid up with dengue."

(334) Observers Report:

"Figure on everything --- quonsets, reefers, cash registers, typewriters, adding machines, forms. It is most important that the demands be anticipated and requests be originated to insure recurring supplies. A good trick is to leave a ships stores officer in the states for a long time and write to him direct on what requests are coming forth. They have as many as five endorsements on requests. Be sure you know whom you are going to have to supply and where supplies are coming from. Check supplies for fleet canteen; also check soda fountain equipment and spare parts."

(335) Observers Report:

"In planning for ships stores location, study personnel needs and how camps are to be laid out. Plot each camp separately, including allowance for ship store, equipment personnel, laundry, cobbler, tailor, watch repair."

(336) Base History:

"While the essential materials were provided for, the experience and foresight of the Supply Officer Lieut. _____(SC) USN, (then Lieut. (jg), brought about the procurement of quantities of material, which while not indispensable, nevertheless supplemented the component supplies and provided some of the refinements important for the morale and physical well being of the officers and men of the organization."

CONSTRUCTION.

(337) From an Official History:

"A Civil Engineer should be assigned to the Industrial Department during the planning stage. This was requested and agreed to in the case of the Industrial Department at _____. The Civil Engineer visited various Advanced Bases with me and the lessons he learned were incorporated in our plans. It was further necessary to have a Civil Engineer at all times to represent the Industrial Department with the Construction Battalions and to be in charge of the construction which was performed by the Ship Repair men themselves, both in their compound in the Ship Repair Area."

(338) From an Official History:

"Also, a set of these foundation plans should be available long enough ahead of time to the planning group to permit adequate layouts of buildings and foundations and to permit work to be planned and to proceed before the arrival of the machine tools."

(339) From an Official History:

"During the planning period at Pearl Harbor it became apparent that, for rapid completion of the ship repair facilities, ship repair men would have to assist the Construction Battalions. Accordingly, arrangements were made for early arrival at ____ of a battalion of ____ ship repair men and officers. This battalion was to be equipped with the same hand tools, transportation, and lighting equipment as a corresponding Construction Battalion, and the equipment placed on the ship transporting the men. The plan was to turn the ship repair battalion over to the Construction Battalions to work directly under the latter's control.

This plan never materialized as intended, and finally, as will be explained later, construction of ship repair facilities was undertaken directly by the Industrial Department. The lesson to be learned is that during the early stages of Advanced Base construction, the ship repair personnel must be organized for construction purposes and not for repair purposes."

(340) From an Atoll History:

"The finger piers which had proved adequate for unloading stores were not entirely suitable for the loading of aircraft which resulted in delays in lightering of planes to and from carriers. A permanent pier with a depth of 25 feet and capable of unloading a Liberty Ship should be constructed at all Advanced Bases which are to serve Fleet Units."

(341) From an Experienced Observer:

"Public works has a problem with no equipment for setting telephone poles. They particularly feel the need of power augers, need line trucks urgently. Coconut poles are no good; they deteriorate too fast.

Also coconut piles are no good for quonsets.

Recommended a concrete block machine for making hollow tile blocks for quonset piling supports.

Much concrete had to be replaced in three months because use of coral and improper mix control. Should have batching plant to control mix."

(342) Official Report of a GroPac:

"In our operation, we built 45 residential quonset huts, attaining a construction rate of 112 man-hours per hut. While not a record, this rate is regarded as fast enough in consistence with good workmanship."

(343) Experienced Commanding Officer of Naval Base:

"As you must recall, I was assured time after time that the Army would take care of all construction and engineering details, but on the contrary we have never been able to obtain any such assistance and have been told that we would not get any. You will, also, recall our conversations concerning the pontoon situation and here, too, the Army had neither the personnel nor the desire to handle them with the result that the beach-head became cluttered with them and an order was issued that no pontoons could be brought ashore in boats or trucked ashore. Rather I was ordered to send a working party out to the ships to lash them together, tow them ashore, and secure them in the water. A rather slow and hazardous task but we triedto comply."

(344) From an Official report on a Ship Repair Unit:

"The most important omission made by me during the planning period was in not organizing the Ship Repair Unit for construction purposes. In all planning for Ship Repair Bases, it is assumed the Ship Repair personnel will, upon arrival, find a camp area set up and the Ship Repair facilities ready to operate.

Actually when our personnel arrived work on the Ship Repair Base was not yet started, and we had to pitch our camp in rice-paddies, arrange to obtain tents, bedding, field ranges, food, etc.

The above had probably been the case, partly or wholly, at every Advanced Base. Therefore, to obtain maximum use of Ship Repair personnel in achieving earliest possible completion of facilities, it is necessary to organize officers and men as a construction unit. Later on, the organization is changed to that for a Repair Unit. Ship Repair personnel have had the same background of experience as the personnel of the Construction Battalions and can do the same types of work.

To enable the Ship Repair personnel to engage in construction work it is necessary that they be supplied with the same tools as are supplied to Construction Battalions. This was done for the Ship Repair Unit at ____. Special tool kits, such as carpenter's tools, electrician's mates tools, machinist's mates tools, linesman's tools, etc., were shipped with the men on the same ship.

There are two ways in which Ship Repair personnel can perform construction work:

(a) They can be used to augment a Construction Battalion or part of a Battalion, and placed under the direct orders of the Construction Battalion officers, or -
(b) They operate as independent units under their own officers.

Both methods were tried. Without doubt, the latter is the better system; it prevents recriminations, complaints, etc.

As delay after delay occurred in the construction of repair facilities, I came to the conclusion that if the facilities were to be completed within a reasonable time the work would necessarily have to be prosecuted by the repair personnel themselves. Accordingly, we took over the entire remaining construction of living area, relieving the Construction Battalions of this responsibility.

Simultaneously, we commenced taking over the work in the Ship Repair area. This work included earth moving and grading, coral hauling, road construction, laying concrete foundations for buildings, pouring concrete and erecting the buildings. It also included the operation of concrete pipe plant and of our entire water supply system, including repairs thereto. At the time of the typhoon, 90% of the personnel working on the Ship Repair area were our own personnel and only 10% were Construction Battalion personnel.

To a lesser extent the landing craft facilities were also constructed by personnel of the Industrial Department."

(345) Experienced Officer:

"Public Works: The public works officer assigned to the bases has been more or less of a rejected CB officer. In my opinion, the ability of this officer is without doubt the one thing which will take the burden of the fighting off the shoulders of the commanding officer and chief of staff. As he does not need to make decisions, he merely acts as a referee in the fight, gets the advantages and disadvantages of each side for each development, places it on paper, and presents the estimate of the situation for decision. These considered decisions are worth much more than the snap judgments presently given by administrative aides. The public works department needs a second officer, not necessarily a CEC, but preferably a good construction man. He must be able to think in big things and not by the Navy idea. He would be better if he were chosen from one of the owners of a construction or building firm. Ex-Navy carpenters think chiefly in terms of installing locks and repairing broken doors and are not successful. The public works officer can not, repeat not, use the plans developed in Pearl Harbor, because of the contours of the ground and necessity for drainage. He should, however, prepare small component drawings while in the planning stage so that he does not have to walk through the rain to some officers tent and ask him what is required in planning the area. It is surprising to me to know how few component officers have been required while in training to develop some idea of what their base should look like."

(346) Experienced Observer:

"Officer-in-Charge said you cannot depend on CB's for much of the construction and should have own complete shops. (They built all their own huts)."

(347) Experienced Observer:

"Officer-in-Command considers that an NAD of any size needs one complete CB Battalion to construct. It is much better when you can get a complete Battalion; you get much more done faster."

(348) Experienced Commanding Officer of Base:

"Based on my experience on _____, I strongly recommend that no Navy unit of any size be sent out to a forward area without having its own construction unit attached to it from the very beginning.

The arrival of the CBMU in late December was a great help, but one CBMU is not sufficient in equipment or personnel to do all the maintenance work and the necessary small construction and repair work that the Base will require. A request has been submitted to augment the CBMU by 3 officers and 100 men. If this cannot be done, then another CBMU should be ordered to the Base, or a portion of a regular construction Battalion."

(349) Experienced Commanding Officer of Base:

"On any island where a naval unit will work under an Army IsCom, a small group of C.B.'s or an augmented camp detachment, on temporary duty, should be sent to build the camp. In no case that I know of has the BDP held up with reference to Navy camp construction.

The present force can accomplish the job but only to the detriment of other vital work and much delay."

(350) Experienced Advanced Base Officer:

"One - just one - CBMU would have made a world of difference to NOB. We strongly urge that, unless better organizational arrangements with construction troops can be made before the next operation, one CBMU be attached to the Base Commander. Building even minimum base facilities without standard bases which have artificers are the repair components ("E") and they are always busy on their own urgent jobs."

(351) Experienced Base Commanding Officer:

"It is strongly recommended that an Advanced Base Organization be furnished with a "Base Construction Equipment Component" of its own, either a P-2, P-3 or P-4 component, to undertake such minor construction without delay, and without diverting the C.B.'s from major projects. A small number of trained mechanics sufficient to operate and maintain the equipment, would be of great help.

An alternative solution to this problem would be to assign a C.B.M.U. to a Naval Base at the outset. This would accomplish the same purpose of using them for minor but important facilities, until such time as they can take over their main functions as a Base Maintenance Organization."

(352)Experienced Commanding Officer of Base:

"In the early stages of the occupation of this island, vital facilities such as pit latrines, which had to be dug deep into hard, coral, could not be undertaken without having to borrow necessary equipment from the Construction Battalions. The C.B.'s were themselves overloaded with work, and often could not spare the equipment."

(353) Observer:

"Do not put radio shop in electric repair hut, too much interference."

BOATS

(354) Army IsCom:

"The shortage of personnel has been mainly felt in the operation of small boats and barges. We have several boats and barges which have not been able to operate because of complete lack of crews."

(355) Experienced Observer:

"As usual a replacement engine pool was in operation to permit putting a boat back in operation in four hours. It was stated that you should have at least 1/3 as many engines in the replacement pool, as you have total number of boats. After six months you "use a hell of a lot of engines". This pool averaged about three engine replacements per day."

Critical repair problems mentioned are as follows:

(1) cracked cylinder liners;
(2) broken heads;
(3) valve inserts;
(4) main bearings;
(5) exhaust valves;
(6) oil and compressor lines.

(356) Experienced Observer:

"The officers and men interviewed were not enthusiastic about a marine railway. They claimed that it was considerable trouble to use. Problem of having to pick out a particular boat for immediate delivery and then be halted temporarily on the work of repairing another "half-dozen boats". Some of these men had had experience in marine railways and claimed that they would not order one."

(357) Experienced Observer:

"Landing craft evacuating casualties from beach to ship and ships to hospital ships should have tarpaulin covers against tropical rain and sun."

(358) Commanding Officer of Base:

"Early in the operation our boat pool personnel ran out of dry fatigue clothes. They were constantly wet, and soon exhausted their supply of personal clothing. I searched the entire island, attempting to find additional greens, without success.

(359) Base Commanding Officer:

"The fact that we are to get along without an LSD for repair of small boats will be a serious handicap, but our request for one of the three was turned down. Our mobile boat unit, - E-9, has done a dandy job, and has helped out units of the army and marines as well as our own work, with their welding operations and general repair facilities. I think the idea of a double E-9 unit with an officer in charge, such as was authorized by you in this instance is an excellent procedure, and conducive to efficiency and results."

(360) Experienced Commanding Officer of Base:

"A fair sized task force will use up to a hundred boats, as running boats, to load provisions, ammunition, and to handle liberty parties. Nothing gives a Base a better name than to have ample boat service for ships who come in for short stays in port and need to accomplish their errands as quickly as possible. Every effort was made to give vessels good boat service but a larger number of small boats would greatly simplify the problem."

(361) Experienced Observer:

"Lack of spare parts was acute. Should take at least three months supply of spare parts initially -- cannot depend on promised shipments."

Repair problems in order of importance, have been as follows:

(1) Clutches and clutch bearings (clutches will not stand up under constant towing);
(2) Cracked heads (water in fuel);
(3) Injectors;
(4) Batteries (at one time had fifty boats tied up because of no batteries)

(362) Official report:

"As mentioned above, our small boats were of very little use to us as we had not harbor or boat basin and it was necessary to keep them off the beach underway for use only when absolutely necessary. We tried planting buoys off shore but the sea was such that we had some losses. The night of the typhoon it was necessary to beach thirty-nine (39) boats. Of this total only three were injured beyond repair. The boats were consequently not put back in the water until the small boat channel at Orange Beach was completed in late December."

CAMPS AND RECEIVING SHIPS

(363) Experienced Commanding Officer:

"At no time has water been plentiful, and recently the Base has been unable to obtain its quota from the Army water points. Anticipating the scarcity, I had all out distillation units overhauled and put back into commission under the supervision of the Engineering Officer of the Base. The amount distilled has been a great help, but is still insufficient."

(363) Experienced Observer:

"On barber shops, we should figure one barber for every 300 men. This depends on whether men can knock off to get haircuts and experience of barber personnel. People put in orders for barber shop equipment a year ago and are just now receiving it. Men brought their own portable stuff. They came out without a barber complement and had to be odd personnel, buglers, pharmacist mates, etc."

(365) Official report 1st Lieutenant of Base:

"In order to provide yourself and your skipper with an idea of what the permanent camp will look like, get the proper measurements of the area laid out on paper and, using rectangular cut-outs and pins, you can arrange a complete camp plan. This allows flexibility and allows your seniors to move location of various buildings on the plan without erasing and redrawing."

"Always provide your men with plans of construction before turning them loose on the job. A simple sketch may save you a day's work later. Suggest that periodical meetingsbe held by the officers so that greater cooperation and combined effort can be achieved.

(366) Official report of 1st Lieutenant of Base:

"Early in this stage it is advisable to devote one 2½ ton truck to haul water for showers, etc. A clean pontoon and pump can be placed on the truck bed to cart water wherever it is needed. This device is better than using trailers, which also require a truck and are tricky to maneuver. Water trailers can be placed at strategic places in the camp and filled from the pontoon on the truck."

(367) Official report of 1st Lieutenant of a Base:

"Some units are equipped with washing machines and implements for small laundry. Usually the men are not available to operate a small laundry, but the building of a small wash and clothesroom proved a boon to all hands. This consisted of a 20' by 56' quonset; one half of the deck was concrete and provided with a drain, and water tubs and four washing machines. The other half of the hut had a plywood floor and was used to sort out clothes and to mark them. One man was assigned to maintain the washroom and did a fine job of keeping it clean and the machines in good repair.

In addition to officer's head and showers, we built three heads, with 32 seats, and two showers, with outlets also totaling 32. We used brackish water from a well on the island for the showers and laundry. Eight trailer tanks were spotted throughout the camp to contain distilled water for drinking, shaving, etc."

(368) Official report of a 1st Lieutenant of Base:

"Other 'housekeeping' facilities also can be given attention at this time. Our two barbers were carpenters mates; we helped them obtain lumber and materials for a barber shop where, in after duty hours, they adequately performed the trimming necessary to keep all hands appearing neat."

(369) Official report of a 1st Lieutenant of a base:

"As soon as bulldozers come ashore, clear an area for a camp site. Quite often units hit places that are already cleared, but the reverse is more likely to be true. Until the 'dozers get ashore, however, the area can be prepared by hand. Use oil, not gasoline, to burn trash.

When sufficient area is available either pyramidal or hospital size tents are advisable to use in the construction of temporary camp. Always pitch a few extra tents because there are certain to be either guests or casualties. Should this be the location and arrangement of the final camp, it is desirable to frame the tents and floor them as soon as dunnage or regular lumber is ashore."

(370) History of Naval Base:

"Immediate action was taken to provide messing facilities, and ten days after the landing, a screened mess hall was constructed almost exclusively from salvaged Japanese material, and was approved by the Island Medical Officer. This building was an immediate success not only with the members of the GroPac, but with the personnel of units all over the island who had transportation to arrive at meal hours."

(371) Experienced Commanding Officer of an NOB:

"The large galley at the main Naval Operating Base was found to be by far the best design for large camps (2000) (and over). Four (4) steam tables permit four (4) lines to be served simultaneously at the rate of five hundred (500) per line every half hour. This galley can feed five thousand (5000) men easily in less than an hour and a half."

(372) Report of 1st Lieutenant of a Base:

"Where water is scarce, I would like to show what was done in our camp. We ran our 1000 man laundry with the waste water from our three 250 g.p.h. distillation units. This water was too hot so we ran it through a cooling tower. The water was slightly brackish but usable. Part of this water was then pumped back for use as circulating water for urinals after we put them inside quonset huts. We also rigged up a circulating system for our ice machines which helped conserve water. All cooking and drinking water used was made with our distillation units, chlorinated. We were fortunate in getting a fair well at 22' which was potable and which was shared with Army and Marine Units. We used this for showers and scrubbing decks."

(373) Base Commanding Officer:

"We must operate messing facilities 24 hours a day."

(374) Base Commanding Officer:

"One of the big problems involved in this is the matter of native villages. The street car and bus systems are, of course, not in operation and the commuter railroad is no doubt a long time project so there are limitations based on how far the natives can travel on foot. This means the establishment of native villages near where they must work and for 700 able-bodied workers this would mean about 2500 to 3000 size native camp, what with the mother-in-law, grandmothers, etc., etc."

(375) Experienced Officer:

"NOB did not receive any of its regular camp component gear until the fourth echelon. NOB were forced to house more than one thousand men without any of its regularly assigned material. This was done by frantic efforts to beg, borrow, or steal."

(376) Official History:

"The number of transient officers housed and fed increased during this month to about four times normal. Difficulty was experienced in unloading ships due to a shortage of pontoon barges caused by their use for lightering aircraft and aviation supplies. In addition it was necessary to unload certain ships in port in order to obtain priority material loaded under unessential cargo."

(377) Experienced Officer:

"Our Receiving Station is only capable of handling a thousand men. However, we are handling three thousand fleet replacements and it is increasing daily. Hot bedding is helping to solve the problem."

(378) Base Commanding Officer:

"We are snowed under with transient personnel, but manage to bed them down somehow and always feed them."

(379) Experienced Commanding Officer."

"Very satisfactory furniture was obtained from our own manufacture, due to the fact that we had an excellent group of carpenters and cabinet makers in GroPac_____."

L53/10-7-47/JSB:dl

CONSTRUCTION MATERIALS POOL, STANDARD SHIPLOAD

General Construction Materials (BuDocks)

Quantities listed below approximate 8400 M.T.

Section 1 - Buildings

Item No.	Stock No.	Material	Unit	Quantity
1	1032-1	Building, arch rib, 40'x100' with necessary conversion materials to make Wests	Each	8
2		Building, Butler type 40'x100'	"	8
3	1A1-8	Hut, 20' x 56' Tropical	"	25
4	1Z1-4	Tent, 16' x 50'	"	20
5	1Z1-3	Tent, 16' x 16'	"	200
6	1Z1-5	Tent, 17' x 20'	"	30
7	1Z1-2	Tent, 14' x 14'	"	50
8	1Z4-1	Flap Tent, plastic mesh, 14'x14'	"	50
9	1Z4-2	Flap Tent, Plastic mesh, 16'x16'	"	200
10	1Z4-4	Flap Tent, Plastic mesh, 16'x50'	"	20
11	1Z4-3	Flap Tent, Plastic mesh, 17' x20'	"	30

Section 2 - Mechanical

12	2Q1-43	Boiler 40HP, 30#WP	"	1
13	2Q1-1	Boiler Heat Pac 642S	"	5
14	2Q1-22	Boiler Heat Pac 150S	"	5
15	2H93-25	Pump, Fire Trailer 500 GPM	"	3
16	2Z18-35	Heater water 15 GPM	"	5
17	2Q54-56	Laundry 75 lb.	"	1
18	2Q56-14	Washer, Clothes 25 lb.	"	2
19	2Q28-1	Range, Field U.S. Army 1937	"	10
20	2Q28-3	Range, Galley Oil Viking	"	5
21	2Q64-16	Refrigerator 150 CF	"	2
22	2Q64-7	Refrigerator 32 CF	"	2
23	2Q63-18	Refrigerator 16 CF	"	3
24	2Q64-20	Refrigerator 8 CF	"	3
25	2E21-6	Purification Unit	"	2
26	2H72-18	Pipe Steel - T & C 4"	l.f.	1000
27	2H72-15	Pipe Steel - T & C 2½"	"	1500
28	2H72-14	Pipe Steel - T & C 2"	"	2000
29	2H72-79	Pipe Steel - T & C 1½"	"	3000
30	2H72-11	Pipe Steel - T & C 1"	"	3000
31	2H72-10	Pipe Steel - T & C 3/4"	"	5000
32	2H72-7	Pipe Steel - T & C ½"	"	1000
33		Valve Gate Hub End - 4"	each	10
34	2H89-46	Valve Flanged 4"	"	25
35	2H89-78	Valve Screwed 2½"	"	25
36	2H89-74	Valve Screwed 2"	"	100
37	2H89-71	Valve Screwed 1½"	"	50
38	2H89-68	Valve Screwed 1"	"	250
39	2H89-66	Valve Screwed 3/4"	"	350
40	2H89-64	Valve Screwed ½"	"	100
41	2H89-35	Valve Swing Check Flanged 4"	"	5
42	2H89-31	Valve Swing Check Screwed 2"	"	5
43	2H89-29	Valve Swing Check Screwed 1½"	"	5
44	2H89-27	Valve Swing Check Screwed 1"	"	5
45	2H89-32	Valve Swing Check Screwed 3/4"	"	20
46	2H75-126	Tees, 4" Screwed, M.I.	"	75
47	2H75-105	Tees, 2½" Screwed, M.I.	"	75

Item No.	Stock No.	Material	Unit	Quantity
48	2H75-94	Tees, 2" Screwed, M.I.	each	200
49	2H75-74	Tees, 1½" Screwed, M.I.	"	200
50	2H75-49	Tees, 1" Screwed, M.I.	"	500
51	2H75-41	Tees, 3/4" Screwed,M.I.	"	700
52	2H75-36	Tees, ½" Screwed, M.I.	"	100
53	2H77-52	Ells, 4",90° Screwed, M.I.	"	75
54	2H77-50	Ells, 2½" 90° Screwed, M.I.	"	75
55	2H77-49	Ells, 2", 90° Screwed, M.I.	"	200
56	2H77-48	Ells, 1½", 90° Screwed, M.I.	"	500
57	2H77-46	Ells, 1", 90° Screwed, M.I.	"	700
58	2H77-45	Ells, 3/4" " Screwed, M.I.	"	1500
59	2H77-42	Ells, 1/2" " Screwed, M.I.	"	100
60	2H77-52	Ells, 4", 45°,Screwed, M.I.	"	50
61	2H77-34	Ells, 2½" " Screwed, M.I.	"	150
62	2H77-49	Ells, 2" " Screwed, M.I.	"	200
63	2H77-32	Ells, 1½" " Screwed, M.I.	"	300
64	2H77-46	Ells, 1" " Screwed, M.I.	"	300
65	2H77-45	Ells, 3/4" 45°Screwed, M.I.	"	400
66	2H81-40	Bushings, 4" x 2" M.I.	"	75
67	2H81-29	Bushings, 2½" x 2" M.I.	"	100
68	2H81-24	Bushings, 2" x 1½" M.I.	"	50
69	2H81-22	Bushings, 2" x 1 " M.I.	"	50
70	2H81-18	Bushings, 1½" x 1" M.I.	"	50
71	2H81-17	Bushings, 1½" x 3/4" M.I.	"	50
72	2H81-12	Bushings, 1" x 3/4", M.I.	"	50
73	2H81-54	Bushings, 3/4" x ¼" M. I.	"	50
74	2H79-20	Unions, 4" Ground Joint, M.I.	"	50
75	2H79-18	Unions, 2½" Ground Joint, M.I.	"	50
76	2H79-17	Unions, 2"	"	50
77	2H79-16	Unions, 1½"	"	50
78	2H79-14	Unions, 1"	"	50
79	2H79-13	Unions, 3/4"	"	50
80	2H79-43	Unions, ½"	"	20
81	2E21-2	Lister, bag w/2 chemical kits each		100
82	2Q1-37	Boiler, steam, 100 H.P., 90 lb. working pressure, complete w/oil burner, controls and accessories	"	1
83	2E21-7	Alum, potassium	lb.	2000
84	2E42-1	Bromthynol,Blue for Cl.determination	c.c.	500
85	2Q2-3	Burner, diesel oil conversion,for 1937 model Army field range	each	200
86	2H81-2	Bushing,brass,std, 3/4" x ¼"	"	20
87	2H81-80	Bushing,brass, std, 3/4" x ½"	"	20
88	2H81-58	Bushing, iron, std, 3/8" x ¼"	"	10
89	2H81-7	Bushing, iron, std, ½" x ¼"	"	10
90	2H81-8	Bushing, iron, std. ½" x 3/8"	"	20
91	2H81-10	Bushing, iron, std. 3/4" x ½"	"	40
92	2H81-33	Bushing, iron, std, 1" x ½"	"	60
93	2H81-21	Bushing, iron, std, 2" x 3/4"	"	40
94	2H81-28	Bushing, iron, std, 2½" x 1½"	"	40
95	2H81-36	Bushing, iron, std, 3" x 2½"	"	40
96	2E21-8	Calcium hypochlorite,70% chlorine	lb.	2000
97	2H85-10	Cap.malleable iron, screwed,3/4"	each	50
98	2H85-11	Cap,malleable iron,screwed, 1"	"	50
99	2H85-23	Cap, malleable, iron, screwed,1½"	"	50
100	2H85-14	Cap,malleable, iron,screwed,2"	"	50
101	2H85-15	Cap,malleable, iron,screwed,2½"	"	50
102	2K22-41	Carbon tetrachloride	gal.	50
103	2H139-4	Cock,gauge,brass, 1/4"	each	10

Item No.	Stock No.	Material	Unit	Quantity
104	2K20-9	Connection,mobile pumper to 6" lightweight pipe	each	6
105	2Q22-10	Cooker,steam, 3 compartment	"	1
106	2E23-1	Cooler, water, electric,drinking fountain,110 volt,single phase	"	2
107	2H80-18	Coupling,malleable iron screwed ½"	"	50
108	2H80-19	Coupling,malleable iron screwed 3/4"	"	100
109	2H80-20	Coupling, malleable iron screwed 1"	"	50
110	2H80-22	Coupling, malleable iron screwed 1½"	"	50
111	2H80-43	Coupling, Victaulic, w/bolts nuts & skts 4"	"	300
112	2H80-44	Coupling,Victaulic, w/bolts, nuts & skts 6"	"	400
113	2H77-128	Elbow, CI,drainage,45°, 3"	"	25
114	2H77-240	" " " " 4"	"	25
115	2H77-130	" " " 90°, 3#	"	50
116	2H77-86	" Victaulic, 45°, 4"	"	20
117	2H77-87	" " " 6"	"	20
118	2H77-90	" " 90°, 4"	"	20
119	2H77-91	" " " 6"	"	20
120	2K22-14	Extinguisher, fire, carbon,tet, 1½ qt.	"	25
121	2K22-33	Extinguisher,fire,C02,15 lb.	"	15
122	2K22-16	" " foam,hand type, 2½ gal.	"	10
123	2K22-40	Extinguisher,fire,foam,portable, 40 gal.	"	5
124	2H139-17	Faucet,sink,female flange,hse,end ½ gal.	"	50
125	2H139-3	" " male shoulder,hse,end 3/4 gal.	"	25
126	2H139-15	" " swing spout, ½"	"	5
127	2Q6-35	Flue,smoke,pipe, 8" diam.	lin.ft.	100
128	2Q39-1	Freezer, ice cream, 6 qt.	Each	2
129	2H87-39	Gasket,Victaulic coupling, 4"	"	100
130	2H87-40	Gasket,Victaulic,coupling, 6"	"	100
131	2K28-5	Gasket, for 6" quick coupling pipe	"	200
132	2H100-27	Gauge,air,4½" dial 0 to 150 lb.	"	3
133	2H100-23	" steam,4½" dial, 0 to 15 lb.	"	2
134	2H100-21	" " ," " 0 to 100 lb.	"	1
1359	2Q18-38	Heater,water,pot type, oil burner, 20 gal.	"	5
136	2Q18-39	Heater,water,pot type, oil burner, 45 gal.	"	3
137	2K24-25	Hose, fire,2½", 50 ft.lengths.	"	10
138	2E28-27	" Suction, 4" x 20'	"	10
139	2E28-29	" " 6" x 20'	"	5
140	2E28-22	" " for Chrysler fire pump, 4½" x 20'	"	2
141	2Q20-1	Hot plate, double unit, 3 heat control,110V.,2400 Watt	"	5
142	2Q37-3	Ice machine, 1 ton per day	"	1
143	2Q35-7	Kettle, steam, 60 gal.	"	2
144	2Q35-1	" " 80 gal.	"	2
145	2Q15-34	Lavatory, double compartment, 42"x18"	"	10
146	2Q22-6	Mixer,dough,electric,1barrell	"	1
147	2Q22-7	" food, 1 HP, 60 qt.	"	2
148	2Q22-14	" " 2 HP, 80 "	"	1
149	2K24-10	Nozzle,fire hose,shut off, 2¼"	"	2
150	2E42-5	Othotolodine	c.c.	1000
151	2Q27-2	Oven,bake,oil,fired,complete	each	2
152	2Q22-15	Peeler,vegetable, 50 lb.capacity	"	1

Item No.	Stock No.	Material	Unit	Quantity
153	2H72-8	Pipe,steel,standard,T&C,3/8"	Lin.ft.	200
154	2K28-7	" " 14 ga.quick coupling 6"	"	3000
155	2H72-29	" " standard, BBE, 6"	"	1000
156	2H93-86	Pump,centrifugal,gas driven,55GPM	Each	2
157	2H93-73	" " " " 200GPM	"	2
158	2H93-79	" Rotary,hand, for refueling	"	5
159	2K22-27	Recharging unit, CO2, complete	"	1
160	2H84-16	Reducer, MI.screwed,std,3/4"x½"	"	25
161	2H84-17	" " " " 1" x ½"	"	25
162	2H84-18	" " " " 1" x3/4"	"	50
163	2H84-72	" " " " 2" x 1"	"	25
164	2K22-17	Refill, fire extinguisher,foam, 2½ gal.	"	50
165	2K22-19	" " " ,foam,40 gal.	"	25
166	2Q64-11	Refrigerator,walk-in type,675 cu.ft	"	2
167	2Q64-3	Refrigerator unit for 675 cu.ft. Reefer		2
168	2030-1	Saw,meat,bone & fish,electric	"	1
169	2Q17-5	Shower head, metal, ½"	"	100
170	2Q15-6	Sink, galley group, 62"	"	5
171	2Q15-35	" Scullery, flat rim, galv.30" x24"x8"	"	5
172	2Q31-8	Slicer, bread, electric	"	3
173	2Q31-5	" bread and meat manual	"	4
174	2Q31-4	" meat, electric	"	2
175	2E21-0	Soda, Ash, powder	lb.	1000
176	2Q12-4	Toilet,vitreous china,flush type, complete w/fittings	Each	20
177	2Q66-1	Tool kit, refrigeration maintenance	"	2
178	2Q64-17	Torch,Freon test,for refrigerators	"	1
179	2S47-12	Tubing, copper, ½" O.D.	lin.ft.	100
180	2S47-14	" " 5/16" O.D.	"	100
181	2S47-15	" " 3/8" O.D.	"	100
182	2H75-393	T-Y, C.I.,drainage, 3"	Each	25
183	2H75-215	T-Y, C.I., " 4"	"	25
184	2H79-11	Union,ground joint, M.I.,std.,3/8"	"	25
185	2Q34-5	Urn, coffee, 8-12 ga.,steam	"	2
186	2H89-228	Valve,quick opening,selfclosing ½"	"	20
187	2H89-220	" Shower,self closing 3/4"	"	25
188	2Q44-1	Washer, dish, 2 H.P., 220V.,AC	"	1
189	2E21-17	Water testing kit,complete (army type)	"	2
		Section 3 - Electrical		
190	3E34-4	Portable Flood light trailer	"	3
191	3E9010	Generator, 5KW AC	"	3
192	3E9-24	" 15 KW AC	"	5
193	3E9-26	" 75 KW AC	"	3
194	3E10-4	Wire,1/c #14 DBWP Solid	MLF	25
195	3E10-103	" 2/c " Romex "	"	10
196	3E10-104	" 3/c " " "	"	5
197	3E10-98	" 1/c #6 Strand	"	30
198	3E10-36	Cable 1/c Strand	"	5
199	3E10-64	Cable 1/c 250 MGM	"	5
200	3E26-12	Lamps, 500 Watt mogul	Each	200
201	3E26-9	" 250 Watt Medium	"	300
202	3E26-8	" 200 Watt "	"	2000
203	3E26-6	" 100 Watt Std.	"	1000
204	3E26-4	" 60 Watt "	"	2000
205	3E14-15	Connectors, #10 wire KS-90	"	1000
206	3E14-26	" #6 wire KS-17	"	500

Item No.	Stock No.	Material	Unit	Quantity
207		Connectors, #1 (for #1 wire)	Each	100
208	3E25-3	Tape, friction 3/4", 1/2 lb. rolls	Roll	200
209	3E25-4	" Rubber " " " "	Roll	100
210	3E18-2	Fuse, Plug Type, 120 volt, 15 Amp.	Each	500
211	3E18-4	" " " " " 30 Amp.	"	500
212	3E18-11	" Cartridge, 250 Volt, 15 Amp.	"	50
213	3E18-12	" " " " 20 Amp.	"	50
214	3E18-15	" " " " 35 Amp.	"	50
215	3E35-5	Insulators, Split Type #5½	"	5000
216	3E35-15	" Screw eye type	"	500
217	3E20-7	Socket, Lamp w/#14 Wire leads	"	1500
218	3E24-18	Receptacle, Duplex, surface mounted	"	700
219	3E44-10	Straps, Non-Metallic cable, 1-hole	"	2500
220	3E43-4	Staple, Copperweld 1-3/4" x 3/8"	"	500
221	3E17-5	Switch, 2Pole, single throw 30 amp.	"	600
222	3E17-9	" " " " " 60 amp.	"	30
223	3E17-12	" 3 " " " 30 amp.	"	15
224	3K16-1	Battery, Aircell, 1-1/4 Volt.	"	100
225	3K16-5	" Drycell, All purpose	"	500
226	3K16-3	" Flashlight (Eveready #950)	"	5000
227	3E71-19	Body, Connector, Cord Grip, 2-wire	"	400
228	3E31-3	Bar, Bus, Copper, 1/4" x 3"	lin.ft.	50
229	3E71-13	Body, Connector, Cord Grip, 2-wire 20 amp	ea.	400
230	3E13-28	Box, Outlet, Steel Octagon, ½" K.O.'s	Each	400
231	3E13-17	" " Square, 1/2" K.O.'s	"	400
232	3E71-36	Cap, 2-wire, 20 amp. Twist lock	"	400
233	3E71-47	" " 15/10 Amp., parallel blades	ea.	100
234	3E14-33	Connector, Straight Through, 250 MCM	ea.	100
235	3E61-1	Cord, Extension, complete w/socket&guard	ea.	40
236	3E96-2	Flashlite, Adjustable Focus, 2 Cell	each	1000
237	3E34-6	Floodlight, 200 watt, Explosion Proof	"	30
238	3E18-14	Fuse, Cartridge Type, Renewable, 30 Amp.	ea.	50
239	3E18-17	" " " " 60 " "		50
240	3E18-1	" Plug Type, 10 Amp.	each	100
241	3E18-3	" " " 20 "	"	100
242	3E19-2	Link, fuse, renewal, 15 Amp.	"	150
243	3E19-4	" " " 30 Amp.	"	150
244	3E19-8	" " " 60 Amp.	"	100
245	3E76-16	Multi-Breaker, 2Pole, 230 Vo., AC, 15 amp.	ea.	50
246	3E76-8	" " 3 " 35 Amp.	each	50
247	3E76-3	" " 2-15 Amp. 1 pole Breaker Circuits, 2-wire	"	50
248	3E76-7	Multi-Breaker, 2-20 Amp., 1 pole Breaker Circuits, 2-wire	"	25
249	3E98-12	Plug, Attachment, screw base, 2-wire 660 watt, 250 volt	"	50
	NOE:	Furnish Items 254 thru 258 incl. if available in depot stocks. DO NOT PURCHASE.		
250	3E15-14	Rack, 4-spool, complete w/4 insulators 4" spacing.	each	100
251	3E15-26	Rack, 4-spool, complete w/4 insulators 6" to 8" spacing	each	100
252	3E24-22	Receptacles. 600 w., 600 v., w/metal cover	ea.	500
253	3E20-37	Socket, Medium Base, Keyless, 660 W, 250 Vo.	"	2000
254	3E20-5	" " " " " " surface mounting	Each	2000
255	3E20-36	Socket, Keyless, 660 W. 600 V., Pull chain	"	500
256	3E17-41	Switch, Safety, Double Throw, No fuse 3 pole, 250 vo., 100 amp.	Each	10

Item No.	Stock No.	Material	Unit	Quantity
257	3E17-15	Switch, Safety Single Throw 3 Pole, 230 Vo., 60 Amp.	Each	10
258	3E17-61	Switch, Tumbler, Surface Type 1 Pole, 125 Vo., 10 Amp.	"	250
259	3E10-24	Wire & Cable, Direct burial rubber on synthetic insulated #6, 1/c	L.F.	2000
260	3E10-36	Wire & cable, Elect. Direct Burial, rubber insulated No. 1, 1/c	L.F.	2000
261	3E10-132	Wire&Cable, Elect. Direct Burial, rubber insulated 500 MCM, 1/c	L.F.	500
262	3E10-103	Wire & cable, Elect. Non-Metallic Sheath, No. 14, 2/c Solid.	"	5000
263	3E10-109	Wire & Cable, Elect. Non-Metallic Sheath, No. 6, 3/c Stranded	"	5000
264	3E10-7	Wire &Cable, Elect., Cord Flexible Type S., No. 14, 2/c Stranded	"	5000
265	4J8-25	Paint, Green No. 2A	Gal.	200
266	4J8-126	Paint, White	"	300
267		Linseed Oil, Boiled	"	50
268	4E1-28	Brushes, Paint 3-1/2"	Doz.	5
269	4E1-30	Brushes, Paint 4"	"	5
270	4A7-5	Cots, Canvas, Complete 2/Nets & Frame	Each	1000
271	4G2-7	Tarpaulins 20' x 20'	"	200
272	4F8-2	Board, Drawing, 36" x 50"	"	5
273	4M2-12	" Stencil (oiled paper)	sq. ft.	100
274	4F7-32	Book, Engineers Level	Each	100
275	4F7-33	" " Transit	"	50
276	4E1-6	Broom, Garage, Fibre, push type, 24"	"	20
277	4E1-8	Broom, House, corn	"	50
278	4E1-88	Brush, Acid soldering, 1/2"x3"	"	20
279	4E1-74	" " swab 1/2" flat	"	20
280	4E1-17	" Painters, 6"	"	10
281	4E1-23	" Paint, Flat, 1", 2", 2½"	" size	10 to 30
282	4E1-47	" Sign Writers, 1/4", 1/2" 3/4" & 1"	" "	5 to 50
283	4E1-73	Brush, Stencil, 1-1/4"	Each	5
284	4E1-66	" Wire, scaling and handle"		20
285	4E1-82	" " " w/o handle"		15
286	4D41-1	Calculating Machine, hand operated	"	2
287	4B16-26	Can, G.I., 32 Gal., nestable	"	50
288	4C41-4	Chair, folding, canvas, with arms"		100
289	4C41-6	" " wood	"	100
290	4F7-1	Cloth, muslin, red	Yd.	50
291	4F7-2	" " white	"	50
292	4F7-	" OZNABURG, green 54" or 60" wide	"	6000
293	4F8-62	Cloth, pencil tracing, 36" wide	Roll	2
294	4F7-46	Cord, plumb bob, linen, medium	Yd.	250
295	4D49-2	Crayon, lumber, blue	Doz.	20
296	4D49-3	" " red	"	20
297	4D49-4	" " yellow	"	20
298	4M2-19	Cutter, stencil, size 1"	Each	1
299	4J8-59	Drier, paint, liquid	Gal.	5
300	4D44-1	Duplicator, machine, fluid type	Each	1
301	4J8-1	Enamel, synthetic, black	Gal.	5
302	4J8-50	" " green	"	5

Item No.	Stock No.	Material	Unit	Quantity
303	4J8-60	Enamel, fire resisting, white	Gal.	10
304	4D44-2	Fluid, duplicator	"	2
305	4J8-110	Lacquer, clear, brushing	"	1
306	4J8-113	Lacquer, lusterless, apple green	"	22
307	4J8-114	Lacquer, lusterless, bright red	"	2
308	4J8-115	Lacquer, lusterless, dark blue	"	2
309	4J8-122	Lacquer, lusterless, white	"	2
310	4c41-21	Mirror, wood frame, 12" x 14"	Each	20
311	4B16-9	Pail, 14 qt.	"	50
312	4J8-64	Paint, flat white	Gal.	100
313	4J8-15	Paint resin oil emulsion, black	"	50
314	4J8-127	Paint, stencil, black	"	5
315	4J8-103	Paint, striping, black	"	5
316	4J8-104	Paint, striping, blue	"	55
317	4J8-105	Paint, striping, green	"	5
318	4j8-	Paint, striping, red	"	5
319	4F8-11	Paper, blueprint, Grade A, slow	yd.	600
320	4F8-12	Paper, cross section, transparent 10 x 10/inch.	"	50
321	4F8-13	Paper, drawing, 36" wide	"	100
322	4D40-129	Paper, duplicator, 8 1/2" x 11"	ream	100
323	4D44-3	" " carbon, f/fluid or direct process	Each	50
324	4D44-4	" " master, f/fluid or direct process	"	50
325	4F8-14	" tracing, 36" wide	Roll	100
326	4F8-1	Potassium, barcomate, technical, crystals	lbs.	50
327	4B17-6	Rags, wiping	lbs.	500
328	4J8-67	Shellac, white	Gal.	5
329	4R4-6	Sprayer, pressure, hand operated 1qt.	Each	200
330	4D40-90	Tacks, thumb	Box	5
331	4G2-5	Tarpaulin, fire&weather resistant 10'x20'	each	100
332	4G2-6	" " " " 15'x20'	"	200
333	4J8-38	Thinner, enamel, synthetic	Gal.	1
334	4J8-41	Turpentine	"	50
335	4J8-58	Varnish, spar, water resisting	"	10
336	4J11-18	Netting, poultry, fabric garnishing, green 2A	sq. yds.	10,000
		Section 5 - Waterfront Structures		
337	5F45-3	Propelling Unit, inboard	Each	5
338	5F45-4	" " outboard	"	5
339	5B1-2	Piling, Wood creosoted, 60' to 70'	"	50
340	5B1-3	" " " 70' to 80'	"	50
		Section 6 -Automotive		
341	6B5-15	Greasing Equipment, Portable	Each	2
342	6J1-	Tires and tubes, Pneumatic-list to be BuDocks list prepared by BuDocks based on inventories of vehicles in movement so that stocks in ACEPD may be maintained. Coverage for 2 1/2 Ton trucks, motor graders, carryall scrapers particularly important.		
343	6B32-	Batteries, list to be prepared by	BuDocks	List
344	6A3-1	Automotive parts, common & supply kits	Each	10
345	6K1-2	Truck, 1/4 ton 4x4	"	10
346	6K3-4	Truck, 3/4 ton, WC, 4x4	"	5
347	6K6-1	Truck, 2 1/2 ton Cargo 6 x 6	"	5
348	6K6-4	Truck, 2 1/2 ton Dump 6 x 6	"	10
349	6B113-1	Acid, Battery electrolyte	Gal.	15
350	6B17-6	Can, gasoline, safety, 5 gal.	Each	10
351	6B12-28	Jack, hydraulic, 8 ton	"	2
352	6B12-16	Jack, hydraulic, 20 ton	"	1
353	6B37-65	Patch, tire casing, repair, (cold) self-sealing 2 1/2" x 2 1/2"	"	100
354	6B37-66	Patch, tire casing, repair (cold) self-sealing 5" x 5"	"	100
355	6B37-26	Patch, tire casing, repair (cold) self-sealing, 6 1/4" x 6 1/4"	"	100

Item No.	Stock No.	Material	Unit	Quantity
356	6B36-39	Patch,tire casing,repair (cold) self-sealing, 8" x 8"	Each	100
357	6B37-67	Patch,tire casing,repair (cold) self-sealing, 11" x 11"	"	100
358	6B37-59	Patch,tire casing,vulcanizing repair 7½" x 7½"	"	50
359	6B37-60	Patch,tire casing,vulcanizing repair 8½" x 8½"	"	50
360	6B37-61	Patch,tire casing,vulcanizing repair 9½" x 9½"	"	50
361	6B37-62	Patch,tire casing,vulcanizing repair, 12½" x 12½"	"	50
362	6B37-63	Patch,tire casing,vulcanizing repair, 15-5/8" x 15-5/8"	"	50
363	6B37-2, 3,4,5.	Patch,tube,hot,1-3/4" dia.1-3/4" oblong,1-3/4" x 4" and 3" dia. (Shaler G-6 or equal) cans	Each size	50
		Secton 7 - Construction Equipment		
364	7L60-43	Bucket,Dragline Complete 2 cu.yd.	Each	2
365	7P1-34,37	Compressor,Diesel driven 315 CFM	"	2
366	7P1-36	" Gas driven 200 CFM	"	2
367	6L55-780	Crane crawler ½ yd with crane boom	"	2
368	7L55-190	" " 3/4 yd with all attachments	"	2
369	7L55-460	" " 1½ yd with shovel,dragline, crane boom	"	1
370	7Q20-5	Drill Wagon Mounted Pneumatic	"	2
371	7N-1-29	Roller 3 Wheel 10 ton	"	1
372	7R1-7	Welder,Elc.Portable 300 Amp	"	2
373	7M1-5	Motor grader	"	1
374	7A71-1	Tractor, class 1 2/dozer and DDPCU	"	1
375	7A1-10	Tractor,class 2 2/dozer and DDPCU	"	2
376	7L1	Lumber 1" dimension r/l & widths	MBF	900
377	7L1	" 2" " " "	"	1,100
378	7L1	" 3" " " "	"	200
379	7L1	" 4" " " "	"	150
380	7L1	" 6" " " "	"	70
381	7L1-66,164	Shiplap, 1" x 6" x 8"	"	100
382	7L1-187.188	" 1" x 10" x 12"	"	100
383	7D52-3	Cement Portland	Bbls.	5,000
384	7N2-9	Nails 6d common wire	Kegs	200
385	7N2-11	" 8d " "	"	500
386	7N2-12	" 10d " "	"	200
387	7N2-15	" 16d " "	"	200
388	7N2-17	" 20d " "	"	200
389	7N2-22	" 60D " "	"	30
390	7N2-79	Boat spikes 3/8" x 6"	lbs.	100
391	7N2-71	" " 3/8" x 8"	"	100
392	7N2-127	" " 3/8" x 9"	"	100
393	7D48-152,167	Screws,wood assorted sizes,flat head	gross	75
394		Reinforcing Rods,deformed,3/8" to 1 mil lengths.	L.Ton	50
395	7L1-133	Plywood, 1/2"	MSF	50
396		Masonite, 3/16"	MSF	30
397	7D102-26	Screen Wire 16 or 18 mesh,bronze or galv.	MSF	200
398	7D55-1	Corrugated Sheet Steel, 24 gauge, 26" x 72" w/nails	Sheets	10,000
399	7D72-8	Roofing, roll 55 lb.	Squares	200
400		Flat Sheet Steel - 24 gauge - 26x72	Sheets	100

Item No.	Stock No.	Material	Unit	Quantity
401	7N2-80	Nails, 2d finish	Kegs	5
402	7N2-39	" 6d casing	"	10
403	7N2-40	" 8d "	"	10
404		Welding Rods, Assorted sizes, elect.	lbs.	30,000
405	7D172-19	Felt, Asphalt, 15 lb.	Roll	200
406	7D172-1	" " 30 lb.	"	200
407		Nails, Roofing	Kegs	25
408	7D42-112	Wire Rope, ½" 6 x 19 HG-Plow Steel	MLF	10
409	7D42-122	Wire Rope, ½" 6 x 19 WC-Plow Steel	MLF	10
410	7D42-114	" " 5/8" " HC " "	"	5
411	7D42-124	" " " " WC " "	"	5
412	7D42-115	" " 3/4" " HC " "	"	20
413	7D42-125	" " " " WC " "	"	10
414	7D42-116	" " 7/8" " HC " "	"	5
415	7D42-126	" " " " WC " "	"	10
416	7D42-117	" " 1" " HC " "	"	5
417	7D42-127	" " " " WC " "	"	5
418	7D42-134	" " 1-1/8"" HC " "	"	5
419		" " " " WC " "	"	10
420	7M2-107	Doors, interior, 1-3/8", x2'-8"x6'-8"	Each	100
421	7M2-132	" screen, 1-1/8"x2'x6'-8"	"	300
422		Lock Sets - interior Door	"	200
423		Padlocks	"	300
424	7D73-2	Hasps, 3"	"	300
425	7D73-5	" 6"	"	200
426	7D73-9	T-Hinges 4"	"	500
427	7D73-10	" 6"	"	100
428		Butt Hinges, 3"	Pr.	300
429		" " 4"	"	200
430		Screen door sets	Each	300
431	7D73-57	Hook & Eyes	"	1,000
432	7D47-182	Bolts, Stove 1/4" x 2"	"	500
433		" Machine, ½" to 3/4" Asst. lgths.	"	20,000
434		Bolt Stock 3/4"	LF	2,000
435		Bolt Stock 1"	"	1,000
436	7D46-12	Nuts, 3/4"	Each	3,000
437	7D46-13	" 1"	"	2,000
438	7D46-34	Washers, 1/4"	"	1,500
439	7D46-38	" 1/2"	"	3,000
440	7D46-40	" 5/8"	"	3,000
441	7D46-41	" 3/4"	"	3,500
442	7D46-46	" 1"	"	1,000
443	7D40-1-3	Hose, Air, 1", w/couplings, 50' lgths.	LF	500
444	7D40-89	" "1-1/2" " 30' "	LF	500
445	7D40-53	" " ½" " 25' "	LF	100
446	7D40-97	" " 3/4" " 50' "	LF	500
447		Adaptors (spuds) 3/4" female hose to pipe thread	Each	50
448		Adaptors (spuds) 3/4" male hose to pipe thread	"	50
449		Adaptors (spuds) 1½" male hose to pipe thread	"	50
450		Adaptors (spuds) 1½" female hose to pipe thread	"	50
451	7Z3-1	Angles plain black 2x2 x 1/4	LF	2,000
452	7Z3-4	" " " 3x3 x 3/16	LF	3,000
453	7D55-2	Sheet Steel 36"x96" flat galv. 24 gauge	Each	250
454		Chloride Lime	Bbls.	50
455	7G20-5	Dynamite, gelatin 1¼"x8" 40%	L.Tons	100
456		" " 5"x16" 60%	"	100

Item No.	Stock No.	Material	Unit	Quantity
457	7G21-1	Cap Blasting, 6' lead wires	Each	3,000
458	7G21-2	" " 8' " "	"	2,000
459	7G21-3	" " 10' " "	"	1,500
460	7G21-5	" " 14' " "	"	1,500
461		" " 18' " "	"	500
462		" " 24' " "	"	500
463		" " 30' " "	"	500
464	7G21-8	Cap Blasting	"	500
465	7G22-1	Wire,blasting, No.14, single	LF	5,000
466	7G22-2	" " No.14,duplex	"	1,000
467	7G2-3	" " No.20,Connectiblast wire	"	2,000
468	7G33-1	Fuse,blasting safety waterproof	Each	1,000
469	7Z3-6	Angle, Steel, 4"x4"x3/8"	LF	200
470	7Z3-25	" " 6"x6"x$\frac{1}{2}$"	"	100
471	7D99-5	Asphalt, roofing	lb	200
472	7W10-6	Bar,crow,wedge,point,181 lb,5 ft.	Each	25
473	7Z2-1	" Steel,flat,hot rolled,1/8"x1"	LF	200
474	7Z2-8	" " " " " 3/16"x2"	"	200
475	7Z2-10	" " " " " 3/16"x3"	"	200
476	7Z2-17	" " " " " 1/4"x4"	"	200
477	7Z2-19	" " " " " 3/8"x3"	"	300
478	7Z2-21	" " " " " 3/8"x4"	"	300
479	7Z2-38	" " " " " 3/8"x5"	"	100
480	7Z2-72	" " " " " $\frac{1}{2}$"x3"	"	100
481	7Z2-28	" " " " " $\frac{1}{2}$"x4"	"	100
482	7Z2-39	" " " " " 3/4"x5"	"	50
483	7Z1-26	" " round cold rolled, 3/4"	"	20
484	7Z1-23	" " " " " 1"	"	20
485	7Z1-36	" " " " " 1$\frac{1}{2}$"	"	20
486	7Z1-29	" " " " " 2"	"	20
487	7Z1-30	" " " " " 2$\frac{1}{2}$"	"	20
488	7Z1-31	" " " " " 3"	"	20
489	7Z1-35	" " " " " 3$\frac{1}{2}$"	"	20
490	7Z1-32	" " " " " 6"	"	20
491	7Z1-3	" " " hot rolled, $\frac{1}{2}$"	"	500
492	7D96-1	Binder,load, 2 hook, 20" lever for 1/4" to 1/2" chain	Each	50
493	7Q12-1,2,3 4,5,6.	Bit,rockdrill,type 1 (Jackbits) 4 pt. (Ing.Rand) 1$\frac{1}{2}$",1-5/8",1-3/4",1-7/8", 2",2-1/8"	Ea.Size	100
494	7Q12-31,32, 9,10	Bit,rockdrill,type 2(Jackbits) 4 pt. (Ing.Rand)1-7/8",2",2-1/8", 1 3/4"	"	400
495	7B4-5	Bronze,bushing stock,tube,1$\frac{1}{4}$",O.D. $\frac{1}{2}$"L.D. x 13"	Each	10
496	7B4-7	Bronze,bushing stock,tube,1-3/4" O.D.3/4" L.D. x 13"	"	10
497	7B4-14	Bronze,bushing stock,tube,2" O.D. 1" I.D. x 13"	"	10
498	7B4-9	Bronze,bushing stock,tube,2$\frac{1}{2}$"O.D. 1$\frac{1}{2}$" I.D. x 13"	"	10
499	7B4-10	Bronze,bushing stock,tube,3" O.D. 2" I.D. x 13"	"	10
500	7B4-3	Bronze, bushing stock,tube 3"O.D. 1" I.D. x 13"	"	10
501	7C5-4	Brush,wire,wheel,6" dia. 4/8"arbor hole	"	5
502	7B7-1	Cable,welding,flexible,No.2/0 w/connectors 50 lengths	"	5
503	7D9[illegible]-2	Can,water,railroad,w/spout,5 gal.	"	50
504	7D42-28	Clip,wire rope, 5/8"	"	200
505	7D42-27	" " " 1/2"	"	100

Item No.	Stock No.	Material	Unit	Quantity
506	7D42-29	Clip,Wire Rope, 3/4"	Each	100
507	7D42-32	" " " 1"	"	25
508	7D42-33	" " " 1-1/8"	"	10
509	7W23-9	Drill,elec.portable,heavy duty ½" 3 way jaw chuck	"	5
510	7W24-100	Drill,high speed,steel,straight, shank 1/8" to 3/4" by 1/16"	Set	5
511	7W22-4	File,flat,bastard,14"	Each	100
512	7W22-92	" " " smooth cut, 12"	"	100
513	7W22-16	" 1/2 round,bastard, 12"	"	50
514	7W22-23	" knife,smooth cut, 10"	"	20
514a	7W22-38	" ,mill,smooth cut, 10"	"	50
515	7W22-70	" ,round,second cut,10"	"	25
516	7W22-48	" ,taper,slim,8"	"	50
517	7R13-30	Flint,f/spark lighter (box of 6)	box	25
518	7R13-7	Flux, Brazo	lb.	25
519	7R13-17	Flux, cast iron	"	25
520	7D40-99	Gasket,hose,air,quick cplgs.3/4"	each	2,000
521	7W52-18	Hammer, w/handle,claw,1 lb.	"	100
522	7R4-1	Holder, electrode, 1/8" to 3/8" rod	"	25
523	7D40-42	Hose,water,w/cplgs. & nozzle,3/4",50' long	"	25
524	7D40-62	Hose,welding,twin with "B" size,connectors 25' lengths,1/4"	"	20
525	7R13-77	Lens,goggle,welding 50mm,cover glass cl.	"	20
526	7R5-2	Lens,helmet,arc welding,2"x4 1/8"clear	"	20
527	7R5-2	Lens,helmet,arc welding,2"x 4 1/8" No.10 shade	"	20
528	7D69-1	Line,chalk,ball	ball	50
529	7L1-31	Lumber,8" x 8 " Random length	MBF	10
530	7L1-32	Lumber, 8" x 10",Random length	"	3
531	7L1-153	Lumber, 10"x14", Random length	"	5
532	7L1-35	Lumber, 12"x12",Random length	"	10
533	7L1-169	Lumber, 12"x14",Random length	"	5
534	7L1-209	Lumber,Plywood,waterproofed 1/4"	sq.ft.	10,000
535	7L1-37	Lumber,Plywood,waterproofed 3/4"	"	1,000
536	7D46-22	Nut,square, N.C.thread, ½"	Each	1,000
537	7D83-2	Oil,thread cutting, sulphur base	gal.	5
538	7R2-40	Rod,welding,Elect.Aluminum, 1/8"	lb.	10
539	7R2-3	Rod,welding,Elect.Brass,bronze,1/8"	"	25
540	7R2-4	Rod,welding,Elect.Brass,bronze,3/16"	"	25
541	7R2-17	" " " Hard surfacing 1/8"	"	50
542	7R2-34	" " " Stainless stl.1/8"	"	50
543	7R2-44	" " " Steel,hard surf.5/32"	Lb.	200
544	7R2-46	" " " high manganese,1/4"	Lb.	25
545	7R2-45	" " " steel,(Lincoln Hardwell 100) 3/16"	"	200
546	7R14-2	Rod,welding,gas,oxyacetylene,Alum. Cast & Sheet 1/8"	"	50
547	7D45-50	Rope,manila or sisal,1½" cir.½"dia.	l.f.	2,000
548	7D45-55	Rope,manila or sisal, 3" cir,1" dia.	"	4,000
549	7D45-58	" " " " 3-3/4" cir.1¼"dia.	"	4,000
550	7D45-60	" " " " 4½"cir.1½" dia.	"	2,000
551	7W31-1	Rule, wood, 6' "Zig-Zag"	Each	100
552	7D75-3	Sand Paper, asst.1 quire ea.No.1,½, 1½,2	pkg.	20
553	7C66-33	Saw,circular, elec.port. 8" blade	each	10
554	7W1-20	Saw,cross-cut,hand,26", 8 point	"	10
555	7W53-4	Sealer, 3/4" strapping(Signode Model 5)	"	1
556	7W53-13	Sealer,1¼" strapping (Signode Model 6B)	"	1

Item No.	Stock No.	Material	Unit	Quantity
557	7W53-8	Seal, 3/4" double crimp (Signode No. 10)	Each	10,000
558	7W53-17	Seal, 1¼" thread on type (Signode No. 107)	"	10,000
559	7W8-10	Shovel, round point, D-handle No. 2	"	50
560	7W8-11	Shovel, round point, long handle, No 2	"	50
561	7W8-5	Shovel, square point, D-handle, No. 2	"	25
562	7W8-6	Shovel, square point, long handle, No 22	"	25
563	7W52-106	Sledge, w/o handle, blacksmith, double face 8 lb.	"	10
564	7D35-8	Solder, wire, 50-50	1 lb.	100
565	7D35-6	Solder, wire, acid core	"	100
566	7D35-4	Solder, bar, 30-70	"	100
567	7Z5-2	Steel, plate, 1/4" x 4' x 6'	Each	5
568	7Z5-3	Steel, plate, 3/8" x 4' x 6'	"	5
569	7Z5-6	Steel, plate, 1/2" x 4' x 6'	"	5
570	7Q11-1	Steel, rock drill, hollow, type 1 (Ing.Rand) 1" x 4½" hex shank, 1" x 2'	"	10
571	7Q11-3	Steel, rock drill, hollow, type 1 (Ing. Rand) 1" x 4½" hex shank, 1" x 4'	"	10
572	7Q11-5	Steel, Rock drill, hollow, type 1 (Ing. Rand) 1" x 4½" hex shank, 1" x 6'	"	10
573	7Q11-6	Steel, Rock drill, hollow, type 1 (Ing. Rand) 1" x 4½" hex shank, 1" x 8'	"	10
574	7Q11-15	Steel, type 2 (Jackrods, Ing.Rand) rnd. 1¼" x 13/16" rnd.shank(Layner-Lugged) 1¼" x 6'	"	3
575	7Q11-16	Steel, type 2 (Jackrods, Ing.Rand) rnd 1¼" x 13/16" rnd shank(Layner-Lugged) 1¼" x 8'	"	3
576	7Q11-18	Steel, type 2 (Jackrods, Ing.Rand) rnd 1¼"x13/16"rnd shank(Layner-Lugged) 1¼" x 12'	"	3
577	7Q11-21	Steel, type 2 (Jackrods, Ing.Rand) rnd 1¼"x13/16" rnd shank(Layner-Lugged) 1¼" x 16'	"	3
578	7Q11-19	Steel, type 2 (Jackrods, Ing.Rand) rnd 1¼" x 13/16" rnd shank (Layner-Lugged) 1¼" x 18'	"	3
579	7W53-9	Strapping, steel, 3/4" x .023"	l.f.	5,000
580	7W53-18	Strapping, steel, 1¼" x .035"	"	5,000
581	7W53-5	Stretcher, 3/4" strapping	Each	1
582	7W53-14	Stretcher, 1¼" strapping	"	1
583	7Q79-3	Threading device, hand f/types 1 & 2 Jackrods	"	1
584	7R13-103	Torch, cutting (Airco No. 9066) w/tips Nos. 1,2,3,4,5, and 6.	"	1
585	7D46-102	Washer, lock, assorted, 14 sizes ¼" to 1½"	Set	1
586	7W100-	Wheel, grinding, coarse, 5/8" arbor, 7" wheel	Each	5
587	7W100-	Wheel, grinding, medium 5/8" arbor, 7" wheel	"	5
588	7D66-1	Wheelbarrow, rubber tired, 4 C.F.	"	20
589	7D132-4	Wire, black annealed, No. 9	lb.	200
590	7D132-9	Wire, black, annealed, No. 16	lb.	200
591	7W15-286	Wrench, socket, in sets, 9 double head sockets ½" sq. drive, 3/8" to 1"	Set	3
592	7G20-6	Dynamite, Gelatin, 1¼" x 8", 60%	l.tons	100

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ANNEX D

THE STORY OF ADVANCED BASE TRAINING IROQUOIS POINT

BRIEF HISTORY OF TRAINING PROGRAM.

Brief reference might be made to the training of the Logistic Support Companies and Base Companies. The advanced base training program for these companies was initiated, planned and executed by the ABPA training department. These companies, (later designated as D-23 Components), were also screened, formed and outfitted at this base. Twenty-two units, comprising 5,500 men and 132 officers, were thus trained and prepared. All were then assigned duty on bases in the forward areas. The regular training curriculum was given to all units. In addition, 16 companies, consisting of 4,000 men and 96 officers, received specialized training in stevedoring to help qualify them for special assignments in this work.

GENERAL TRAINING - SANITATION

No subject in the curriculum received more emphasis than sanitation. The many unfortunate experiences during the earlier stages of the Pacific war drove home a lesson which dared not be ignored or treated lightly. It was soon learned that our casualties resulted not from enemy action alone. Disease resulting from unsanitary conditions proved to be a much more devastating weapon. Statistics in the various combat zones in the Pacific vary according to the locality, but when it is considered that in some areas the rate of deaths and casualties produced by disease was ten times as great as that caused by enemy fire, the appalling nature of the problem may be appreciated.

Malaria, dengue, dysentery, diarrhea, elephantiasis, filariasis, etc., are terms unfortunately too often heard. They were an excellent form of ammunition for the Japs. Particularly was this true in the days of Guadalcanal, Tulagi, New Guinea and fighting in the Southwest Pacific generally. Meager opportunity had theretofore existed to study these newly prominent tropical islands from the standpoint of health and sanitation. Knowledge of these quickly became a vital necessity. A sick man not only became a non-producing

factor to his unit but tied up other personnel required to look after him. This situation is vexatious when the disability results from a disease which might have been avoided by proper sanitary practices.

Our medical men promptly went to work to combat this condition. It was found that these diseases were caused principally by mosquitos, flies, and other insects and pests. Measures were taken to eliminate the causes - and with marked success. Education of our personnel in the methods of building a clean camp and keeping it clean paid big dividends. The proper methods of disposing of garbage and human waste, the eradication of breeding places for insects and rodents, the sterilization of messing and cooking gear, the neat storage of supplies, the purification of all water, the careful supervision of galley and mess-hall sanitation, attention to personal hygiene, the effective use of insecticides, plus CONSTANT VIGILANCE - these factors brought about a tremendous improvement in the health and sanitation problem. Men were taught how flies, mosquitos and other insects breed, as well as how to exterminate them. The gratifying result was that eventually the acquiring of one of the diseases mentioned was somewhat a rarity.

All hands were given training in sanitation. That was a MUST. In addition, a special sanitation squad was required for each staging unit. The number of men recommended for this squad was two percent of the entire complement of the unit. These men were given special, intensive instruction and were assigned the direct responsibility of looking after the sanitation of the camp. In addition to the subjects mentioned above, they were taught how to construct the various types of heads, fly-traps, scullery stoves, wash stands, laundry stands, shower stands, galleys, mess-halls, grease-traps, garbage incinerators and other sanitary facilities. In many instances, where shipping space permitted, they prefabricated this type of gear under supervision at the training center and took it with them to the target.

The general sanitation course consisted of lectures, films, a trip through

the field exhibit and the application of this knowledge throughout the bivouac period. All hands were made strongly conscious of the great necessity for absorbing information.

SPECIALIZED TRAINING

In the earlier period of the Pacific War, most of the Advanced Base Naval Units staged in the Hawaiian Area. It was found that some units, due to the unavoidable rush of events or other causes, had received either no training at all or perhaps only sketchy training. An excellent opportunity was thus presented for improving the efficiency of these units by giving them the latest and best instruction available relative to advanced base operations. Also, by being taught the lessons learned "the hard way" by their pioneering predecessors, these units could be helped considerably during their stay in the Hawaiian Area.

With this definite object in mind, the Officer-in-Charge of Advanced Base Section directed the establishment of a training program, under the jurisdiction of Advanced Base Personnel Administration at Iroquois Point. The designated purpose was "to assist all personnel, both officers and enlisted, of Advanced Base Naval Units staging in the Hawaiian Area in attaining the maximum degree of proficiency and readiness for their particular tasks by providing for them effective training" of a practical nature, tailored to the specific needs of the trainee groups. "LEARN BY DOING" was the guiding principle.

This training program was launched in March 1944. It was begun on somewhat small scale, but the ever increasing need for its services plus the reports from time to time received from the target areas as to its effectiveness led to its gradual expansion to a staff of 12 officers, 150 enlisted men and 2 Naval Technicians, all assigned to training duties.

The type of training offered was two-fold: (1) Tactical and (2) Technical.

THE STORY OF ADVANCED BASE TRAINING IROQUOIS POINT

Tactical training comprised those subjects designed to teach the men to perform the necessary maneuvers, as a military unit, for establishing a location in the proximity of the enemy where men and material could be strategically placed and housed, preparatory to or even simultaneously with the performance of the technical mission assigned. Specifically stated, tactical training consisted of showing the men how to disembark from their ship under combat conditions, how to hit the beach, dig in, set up sanitation facilities, live on field rations, pitch tents, handle firearms, set up camp defense, handle motorized equipment, move cargo to the compounds, etc. In other words, how to get the unit in readiness for performance of the technical operations assigned. A list of the subjects taught under tactical training follows:

T A C T I C A L T R A I N I N G

I. SANITATION
- General Training
- Prefabrication of Gear and Camp Supervision
- Training of Insect and Rodent Control Squads
- Galley, Scullery, Etc.

II. FIRST AID

III. CAMP INSTALLATIONS
- Field Generators
- Quonset Hut Erection
- Refrigeration
- Tent Erection
- Water Distillation
- Water Purification

IV. CAMP DEFENSE
- A. Weapons
  - Anti-Aircraft Guns
  - Field Stripping
  - Firing, Dry
  - Firing, Practice
  - Hand Grenades
  - Machine Guns
- B. Security
  - Air Raid Drill
  - Booby Traps, Mines and Bomb Disposal
  - Camouflage Methods
  - Field Fortifications
  - Fire Fighting
  - Gas Decontamination
  - Gas Masks

IV. CAMP DEFENSE (Cont'd)
- B. Security
  - Interior Guard
  - Military Discipline
  - Perimeter Guard
  - Scouting & Patrolling
  - Sentry Duty

V. GENERAL DRILL
- Military Drill
- Rolling Field Packs
- Ships Side & Beach Assault

VI. BIVOUAC

VII. SPECIAL TRAINING
- Automotive Maintenance
- Automotive Operation
- Boat Operation
- Cargo Handling
- Logistics, Planning and Procurement
- Marlinespike Seamanship
- Movie Operator
- Recognition (Surface and Air Craft)
- Special Lectures and Films
- Visual Signaling

VIII. OTHER TACTICAL SUBJECTS
- General Indoctrination
- Physical Conditioning
- Swimming
- Unit Organization

THE STORY OF ADVANCED BASE TRAINING IROQUOIS POINT

Technical training, of course, included those subjects which would assist the unit to accomplish the principal object for which it was activated. Examples are boat operation, ship and boat repair, harbor patrol, communications, stevedoring, storage and supply, camp construction, port director's work, beachmaster's work, etc., depending on the specialty involved. Personal instruction and supervision were given to each of the trainees. In addition, as much opportunity as possible was afforded to the various components to work together on a designated project as definitely organized groups, so that, when the men arrived at the target to perform their particular assignment, their capabilities would be known to each other and a spirit of teamwork would be developed.

In furtherance of the idea of "learn by doing", trainees were given definite jobs to do, such as repairing boats, constructing new waterfronts, erecting huts and buildings, assembling pontoons, stevedoring work, etc. Thus a dual purpose was served. The trainees acquired much valuable experience and the navy derived the benefit of their efforts in the form of tangible improvements made and services rendered. A great many boats which otherwise might have been surveyed were thereby put back into active use. Likewise, with other improvements and work done by the trainees.

Courses in technical training which were offered at the ABPA training center include:

T E C H N I C A L T R A I N I N G

I. CARGO HANDLING
- General Instruction
  - Lecture
  - Films
  - Practice Operations
  - Actual Operations
- Motorized Equipment
  - Cranes
  - Tractors
  - Finger Lifts
  - Bulldozers
  - Trucks
  - Miscellaneous

I. CARGO HANDLING (Cont'd)
- Stevedoring
  - Lecture
  - Films
  - Shipboard Experience

II. BOAT OPERATIONS
- Small Landing Craft
- Picket Boats
- Plane Personnel Boats
- Plane Rearming Boats
- Miscellaneous Boats

THE STORY OF ADVANCED BASE TRAINING IROQUOIS POINT

II. BOAT OPERATION (Cont'd)
- Pontoon Barges
- Diesel Engines
  - Lecture
  - Motor Tune-up

III. BOAT REPAIR
- Hull Repair
- Engine Repair
- Motor Overhaul
- Machine Ship
- Paint Locker
- Shipfitter Shop
- Electric Shop
- Mobile Repair Unit

IV. GUNNERY & ORDNANCE
- Booby Traps
- Degreasing
- Field Stripping
- Hand Grenades
- Maintenance
- Mines
- Repair
- Unexplored Ordnance

V. OTHER TECHNICAL TRAINING
- Camp Construction & Maintenance
- Dock and Waterfront Repair
- Fire Fighting (Aboard Ship)
- Harbor Patrol
- Maintenance of Motorized Equipment
- Photography
- Piloting
- Pontoon Assembly
- Pontoon Dry Dock
- Port Directors
- Movie Operation
- Shallow Water Diving
- Quonset Hut Erection
- Miscellaneous

The Commanding Officers of Advanced Base Personnel Administration during the period of the operation of the training program, from March 1944 to September 1945, were chronologically as follows: Captain Myron E. THOMAS, U.S.N., from March to June 1944; Commander Alexander S. EDWARD, U.S.N. (Ret), from June to September 1944; Captain Alphonsus L. MADDEN, U.S.N.R., from September 1944 to September 1945.

The Training Officers during this period, in the order of their assignment, were: Lt. David E. WARD, U.S.N.R., from March to September 1944; Lt.Comdr. Marshall MEYER, U.S.N.R., from September 1944 to September 1945.

The training program was always kept alert to changing conditions and improved methods. It was molded so as to impart to all trainees the latest and best information on each subject in the curriculum. Courses were added, others deleted, others expanded, according to the needs of the particular trainee group. Current information was acquired by trips made to the favored areas and by the procurement of written and oral reports from units and men with actual field experience.

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THE STORY OF ADVANCED BASE TRAINING IROQUOIS POINT

Thorough indoctrination of officers attached to advanced base units was found to be especially beneficial. Particular effort was made to keep staff officers of these units fully advised as to current developments, problems and procedures. Lectures, illustrated and otherwise, given by officers returning from the target areas were arranged for trainees; special lectures for officers were given by Captain A.L. MADDEN who, by virtue of his experience as Commanding Officer of one of the "pioneer" units successfully completing an actual operation in the Marshall Islands, was helpful in transmitting valuable information and suggestions to these trainees.

During the period from March 1944 to September 1945 approximately 50,000 enlisted men and officers received instruction at this training department. More than 150 separate units were served and these represented in excess of 45 different types of units. A list of these groups follows:

ACORN 33
ACORN 35
ACORN 37
ACORN 38
ACORN 39
SLCU 24
SLCU 34
SLCU 36
SLCU 38
SLCU 40
Gropac 6
Gropac 8
Gropac 9
Gropac 10
Gropac 11
Gropac 12
Gropac 13
Const. Batt. Off. Pool
Const. Batt. Spec. 1035
Const. Batt. Spec. 1041
Comm. Unit 14
Comm. Unit 16
Comm. Unit 17
Res. Comm. Unit 25
Comm. Unit 43
Comm. Unit 47
Comm. Unit 47B
Comm. Unit 434
Comm. Unit W
Comm. Unit X
Comm. Unit Y

Const. Batt. Spec. 1042
Const. Batt. Spec. 35
CB Maintenance Unit 523
CB Maintenance Unit 595
CB Maintenance Unit 597
CB Maintenance Unit 617
CB Maintenance Unit 620
CB Maintenance Unit 624
Const. Batt. 7
Const. Batt. 8
Const. Batt. 13
Const. Batt. 14
Const. Batt. 21
Const. Batt. 23
Const. Batt. 27
Const. Batt. 35
Const. Batt. 43
Const. Batt. 50
Const. Batt. 52
Const. Batt. 57
Comm. Unit 471
Comm. Unit 46
Comm. Unit 45
Comm. Unit 402
Component X
CASU 44
CASU 48
CASU 49
CASU 52
Lion 6

Const. Batt. 70
Const. Batt. 90
Const. Batt. 92
Const. Batt. 93
Const. Batt. 94
Const. Batt. 95
Const. Batt. 98
Const. Batt. 103
Const. Batt. 106
Const. Batt. 125
Const. Batt. 128
Const. Batt. 130
Const. Batt. 135
Const. Batt. 136
Const. Batt. 137
Const. Batt. 157
Const. Batt. 81
Const. Batt. 83
Const. Batt. 64
Const. Batt. 30
Lion 8
Lion 9
Cub 12
Cub 15
Cub 17
LCI Personnel
Advanced Base
Officers' Pool
Advanced Base
Personnel Pool
Lirp 57

Fleet Med. Unit
Advanced Base
Medical Unit
Whole Blood Unit
Ford Island Corpsmen
Aiea Hospital
PRMCU
Anti-Aircraft TC-Hodo
Anti-Aircraft TC-Duva
CincPac Civil Affairs 1
CincPac Civil Affairs 2
Fort Kam Civil Affairs
2nd Marine Air Wing
3rd Marine Wing
Sea Survival Unit
VMSB 32
VMSB 332
VD-5 (Photographic)
Air Warning Sq. 6
Air Warning Sq. 7
Transrun 15
Naval Air Station
B4D(Beachmaster Group) 7
B4D(Beachmaster Group) 9
Boat Pool S-602

B4D(Beachmaster Group) 15
B4D(Beachmaster Group) 17
B4D(Beachmaster Group) 21
B4D(Beachmaster Group) 29
B4D(Beachmaster Group) 35
B4D(Beachmaster Group) 41
B4D(Beachmaster Group) 101
Mag Unit 2 and 33
Section Base
D-2 #3
E-16 E-17
MRU 16
MRU 17
MRU 18
MRU 19
NAS-D-1 #5
FRU PAC
Radio Inst. Unit 2
Army Units
Adv. Base Const. Depot
Marine Motor Transport
Marine Air Station
Base Co. 9
Base Co. 52
Base Co. 42

Base Co. 40
LVT 1
LVT 2
LCI's
Logistic Support Co. 500
Logistic Support Co. 501
Logistic Support Co. 502
Logistic Support Co. 503
Logistic Support Co. 504
Logistic Support Co. 505
Logistic Support Co. 506
Logistic Support Co. 507
Logistic Support Co. 508
Logistic Support Co. 509
Logistic Support Co. 510
Logistic Support Co. 511
Logistic Support Co. 512
Logistic Support Co. 513
Logistic Support Co. 514
Logistic Support Co. 515
Logistic Support Co. 516
Logistic Support Co. 517
Logistic Support Co. 518
Mobile Explosives
Investigation Unit 4
Miscellaneous Units

This list is not entirely complete, inasmuch as a number of small groups which were trained over brief periods are not included. From time to time instruction was requested by Army and Marine activities and, insofar as possible, these requests were fulfilled.

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14 April 1945

MEMORANDUM OF A DISCUSSION WITH LT. KELSO, FORMER EXECUTIVE OFFICER, GROPAC 6.

(1) Handling of Material:

(a) Captain Ware at SAIPAN has complete information on this subject.

(b) Get up a detailed plan for handling material as it hits the beach from vessels going in to unload.

(c) Take particular care of oxygen and acetylene bottles since all activities are short of these and they will try to obtain as many as they can.

(d) Have men stationed to see that crates are lowered properly so they do not break open or become otherwise damaged on being unloaded from the ship.

(e) Personnelfrom the various ships, particularly those who will use the material, should supervise the lowering and moving of material.

(f) Personnel should be obtained ahead of time and trained for the particular duties they will perform in connection with unloading.

(g) Obtain a definite storage space for material. If possible, use a good space for which arrangements have previously been made with the Naval Supply Depot. This space should be clearly marked off to indicate where each item is to go.

(h) In storing material in this space, the present and future accessibility should be taken into account. Those items which will be used early should be given easy accessibility. Also, small items should not be placed so that large items must be moved in order to reach them. This applies particularly to consumables and to small tools.

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14 April 1945

MEMORANDUM OF A DISCUSSION WITH LT. KELSO, FORMER EXECUTIVE OFFICER, GROPAC 6

(2) Repairs:

(a) Be sure to have cranes which are capable of picking up an LCM completely rather than to have a crane which merely lifts the stern of the boat. When the latter type of crane is used, it is inoperative until repairs to the boat have been completed, whereas with the former type the boat can be deposited on skids or trailer truck and the crane is again in use immediately. This is particularly important for emergency and assault repairs.

(b) Arrange with the Island Commander that cranes and other lifting equipment assigned to the various repair units are not used for other purposes, otherwise, in view of the usual shortage of lifting facilities, there will be a constant attempt to divert lifting facilities for other than repair purposes.

(c) Obtain beforehand a suitable stretch of the beach where the repairs are to be made.

(d) Be sure to have an adequate number of Diesel technicians, particularly those who are familiar with Gray engines.

(e) Insist that the Boat Pool Officer work closely with the repair unit.

(f) Designate an officer from the Repair Department as Liaison Officer with the Boat Pool. He will see to it that Coxswains and Engineers are indoctrinated, that Check-off lists for maintenance are complied with, etc. He should stay with the Boat Pool.

(g) See Captain Ware and mention Lt. Burnett. It will probably be possible to obtain copies of Organization, Administration, and Check-off Lists for boat repairs.

MEMORANDUM OF A DISCUSSION WITH LT. KELSO, FORMER EXECUTIVE OFFICER, GROPAC 6

(2) Repairs (Cont'd.):

(h) Organize a regular school for the boat crews, both for the Coxswains and the Motor Mechanics. They can thus be instructed in proper maintenance and this will reduce repairs considerably.

(i) Make sure that an adequate supply of spare parts for initial repairs to boats are available.

(j) If personnel for repairs of boats is inadequate, arrange with the Officer in Charge of the Boat Pool for the boat crews of boats under overhaul to remain with their boats. These crews can be used to chip and paint, the Motor Mechanics can assist in repairs. This is also conductive to training and better maintenance.

(k) Be sure to obtain adequate supplies of deep sea diving gear and underwater cutting gear early in the game. There are never enough of these and they are invaluable.

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14 April 1945

MEMORANDUM OF A DISCUSSION WITH LT. KELSO, FORMER EXECUTIVE OFFICER, GROPAC 6.

(3) Care of Personnel:

(a) Adequate care of personnel is of primary importance. Men should be taken care of first--before officers. At any rate, living and messing facilities for officers should be no better than those for the men at the beginning.

(b) Provide some recreation facilities as soon as possible. Provide for movies at the earliest possible moment. Provide showers at once. Insist on conservation of fresh water.

(c) In assignment of living spaces, locate men by Functional Components rather than indiscriminately in the compound. This will render it easier to make available groups of men for particular jobs under emergency conditions.

(d) Require Junior Officers to be thoroughly familiar with their men, to inspect living and messing facilities of the men, and to become personally responsible to those under them.

(e) Hold regular inspections of living spaces, etc.

(f) Keep boat crews together in living spaces.

(g) Provide all-night coffee and have sandwiches, etc.

(h) Make provision to take care of visitors.

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14 April 1945

MEMORANDUM OF A DISCUSSION WITH LT. KELSO, FORMER EXECUTIVE OFFICER, GROPAC 6.

(4) Organization:

(a) Improvise equipment as necessary for echelon equipment arrivals.

(b) Have a Fire Bill and a Security Bill made up ahead of time.

(c) Establish Fire Watches, etc.

(d) Drill men in Fire Protection.

(e) Have a Fire Marshal.

ANNEX F

ADVANCED NAVAL BASE ESTABLISHMENT FORCE

	Personnel	Equipment Measured Tons
Administration	10	95
Intelligence	2	40
Shore Patrol Internal Security	40	80
Harbor Entrance Control Post and Permanent Visual Communications	30	90
Harbor Patrol	17	380
Port Director (APD) including Port Directors Communications Unit	25	615
Communications Unit	25	250
Garrison Boat Pool	200	0
Advanced Materials Handling Unit	40	160
D-23 Logistic Support Company	255	120
E-9 Repair - Small Amphibious Craft (with 3 sets of shop consumables)	28	290
Garrison Beach Battalion (2 companies and Hq. Detachment) (Including Bomb and Mine Disposal, Beachmaster)	120	1400
Special Augmented Hospital (Tailored by Bu Med) (20 Beds)	30	575
Fire Protection	3	100
Fuel Barges and Fueling Facilities - Self-Propelled Compartmentalized (To be filled at Target)	15	200
B rought in on Pontoon Assembly Ship:		
Diesel		
MoGas		
Black		
Land Transportation Facility (Trucks and Trailers)	103	1700
Freight Handling Facility	60	800
Net Component		
Pontoon Gate Vessels 2		
Pontoon Net Tending Barge 1		
Nets to be laid by Net Layers attached to Amphibious Forces	30	0

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ADVANCED NAVAL BASE ESTABLISHMENT FORCE

	Personnel	Equipment Measured Tons
Ten - Q-2 Pre-Embarkation Components		30
Four - N -1A Camps	125	2100
One - N -7B Camp (For Receiving Station)	81	1700
Totals	1234	11125
Personnel Tonnage and Ready Supply of Fuel		617
		11742

6 LSTs, 1 APD, 1 AN, and 1 Pontoon Assembly Ship would be required to Lift this Unit.

GENERAL NOTE:

These tonnages are based upon the tonnages required for the mount-int of similar units in the Central Pacific Area. They would necessarily vary with the composition of the units as tailored for various targets. These figures are not considered as, in any sense, final but are merely put forward as a basis for future plans.

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FLEET SERVICE OFFICE

I. INTRODUCTION:

The primary function of a Naval Operating Base in an advanced area is to serve the FLEET.

It is quite possible that service to the fleet at present and future bases can be improved by standardizing, to some extent, the Fleet Service Offices.

Therefore, it is recommended that consideration be given to the proposal that ComServPac: (1) Present suggestions to the Commanding Officers of the larger bases regarding the organization and physical arrangement of their Fleet Service Offices; (2) Make suggestions to these Commands regarding the makeup of the Fleet Service Manual and the distribution of the manual at their particular base; (3) Arrange for more general distribution plan, whereby an exchange of manuals by the larger bases would take place, thus permitting at least the larger ships to know more about the port they are to visit next; (4) Help in arranging for material to be used by new bases in making up their manuals, during the period of their development when material and makeup would be difficult for them to procure; (5) Arrange for regular "Suggestion Letters" from Fleet Service Officers, so that ideas for improving service to the fleet, could be learned, recapitulated and redistributed among the major bases.

Naturally Fleet Service Offices will vary at different bases depending upon circumstances. For example, if there is an NSD branch at the Fleet Landing of a particular base, the necessity for supply officers at the Fleet Service Office will be very small. Probably one officer to answer general questions on supply and help to put the inquirer on the right track will suffice.

On the other hand, if the Commanding Officer of a base is of the opinion that there will be no branch of NSD at the Landing, and that all transactions for supplies will take place thru the Fleet Service Office, a large staff will probably be necessary.

Therefore it is assumed in making the following suggestions that no NSD branch is located at the Fleet Landing and that supply requisitions are to be submitted thru the Fleet Service Office.

II. ORGANIZATION:

Fleet Service Officer - This officer should preferably be a member of the Supply Corps, because 75% (plus) of the activity in the Fleet Service Office has to do with that department. Furthermore, the Fleet Service Officer should be a Lieutenant Commander. He would probably hold this rank anyway because of his responsibilities, but rank is helpful in keeping unreasonable requests in line.

This Officer should be responsible for the smooth functioning of the office as a whole. He should have direct control over the Supply Corps Officers and be fully responsible for the supply activity at the Fleet Service Office, but have only administrative control over the other section heads, i.e., ammunition - training, etc.

Assistant Fleet Service Officer and General Supply Section Head The duties of this officer should be: (1) To act in the place of the Fleet Service Officer when he is absent; (2) Help representatives of the fleet in making out their requisitions for general supplies; (3) Inform these representatives as to when, where, and how they can pick up their stores.

Fuel and Water Officer - This officer should: (1) Assist in making out requisitions for fuel; (2) Actually arrange with the base or island fuel officer for the completion of orders and delivery of fuel to the ships; (3) Make arrangements with the port directors office for delivery of water to the fleet. (NOTE: The point has been made that the Fuel and Water Officer should be located in the Port Director's Office because most ships make their requests for these two services by signal. However, it would appear that the signal tower could notify the fuel and water officer in the Fleet Service Office as easily as if that officer were located in the Port Director Office, thus permitting all the fleet services to be kept under one roof).

Fresh and Dry Provisions Officer - This officer should: (1) Aid in making out requisitions for fresh and dry provisions; (2) Inform the fleet representatives when, where, and how they can pick up these provisions; (3) In cases where persons from the fleet need further service or advice from the Naval Supply Depot, make the proper contact for them.

Clothing, Small Stores and Ship's Stores Officer - This officer should help representatives of the fleet in making out requisitions for clothing, small stores, and ship's service supplies: (2) Inform them as to when, where, and how they can pick up these supplies; (3) In cases where persons from the fleet need further service or advice from Naval Supply Depot, this officer will make the necessary contact for them at Naval Supply Depot.

Aviation Supply Officer - The function of this officer will be to see that the needs of the fleet insofar as aviation supply is concerned is taken care of. He will not only actually help in making out requisitions but he will follow thru and see that aviation supplies are delivered properly and on time. He will act as liaison between the fleet and NASD.

General Information Officer - The function of this officer will be as follows: (1) Disseminate information on how to find places and people; (2) Arrange for the checking of knives, pistols, and any other packages that members of the fleet wish to leave at the fleet service office. He should also have charge of vehicle and water transportation, which is normally a very busy desk and requires an alert and very tactful person to run it.
(See transportation).

Ship Repair - Radio Supply and Radio Material Officer - There should be very little for this officer to do insofar as Ship Repair Service is concerned. For the most part, directing people to the Industrial Manager's Office and answering general questions about Ship Repair will be the extent of his efforts.

However, insofar as Radio Material and Supply is concerned, he should have a very active desk if he does his job properly.

SPDC Officer - Is, as his name implies, the direct representative of SPDC and his job is to see that the fleet gets the spare parts for which they ask, with a minimum of effort.

Ammunition Officer - The duty of this officer would be: (1) To assist in making out orders for ammunition for representatives of the fleet who make the requests; (2) Follow through with the ammunition depot to be certain that the order is filled and delivered on time to the pier or the ship as the case may be.

Ordnance Supply Officer - Will be responsible to see that requisitions for ordnance supply are properly made out and that these supplies in turn are dispatched to the ship making the request. (NOTE: Undoubtedly in most cases the Ammunition Officer could man this desk in addition to his own).

Training and Education Officer - The function of the officer in charge of these two sections could vary materially, depending on the extent to which the Commanding Officer of the base wished to serve the fleet from the Fleet Service Office. If it is his policy to have the Fleet Service Office give only general information on training and education, and have the Fleet Service Officer act only as a liaison between the fleet representative and the training and the educational departments, the work load would not be too great, and might even be taken over by the officer in charge of the General Information Section.

However, if the Commanding Officer desired to have an arrangement whereby the fleet rerpesentative could go to the Fleet Service Office, a nd discuss either training or educational facilities with an officer who was completely familiar with these two activities, and who could discuss, advise, and actually arrange for the delivery of these two services, the billet would of course become a very busy one. Either method of operating could be used at these two desks.

Fleet Recreation Officer - This desk could be run in either of the two ways just mentioned. It would seem, however, that much time could be saved by having an officer who worked directly under the island or base Fleet Recreation Officer, in charge of this desk so

that he could not only give complete information on the recreational programs, but actually arrange for the schedule rather than have the fleet representative have to go to still another source.

Fleet Service Manual Officer - The duties of this officer would be: (1) To write and assemble the first Fleet Service Manual used at the base; (2) Keep the corrections in the Manual up to date by seeing that all corrections came out promptly and were distributed to the holders of the Manual; (3) Exchange information with other Fleet Service Officers; (4) Be responsible for seeing that all Fleet Service Manuals were in good condition when redistributed to members of the fleet.

III. PHYSICAL ARRANGEMENT:

Location - The Fleet Service Office should, of course, be located at the Fleet Landing, so that all officers and men from the fleet having business to transact can do so with a minimum of effort. The building should be identified with adequate signs.

Interior - It is recommended that a counter about 80 feet in length be installed. This will permit the departments concerned to have adequate space in which to transact their business. Ample waiting room should also be provided, because the fleet seems to congregate at the Fleet Service Office, especially if there is no covered waiting room at the Fleet Landing. In any event, it is quite ordinary for several hundred people to visit the Fleet Service Office daily, so adequate space is essential.

Hidden (under counter) storage space is very important. Requests to check knives, pistols and packages are constant. Furthermore there must be ample space for stowing Manuals and office supplies. It would probably be very wise to build sections (a few more in number than there are pages in the Manual) so that each pile of pages could be individually laid out, thus making the assembly of new Manuals efficient.

There should be an office for the Fleet Service Officer which could of course be used by other members of the staff for conferences when it was not in use. All other officers and men would sit

at their desks behind the counter so they would be quickly available.

A second office or room to be used by fleet representatives in making out large numbers of requisitions is desirable--it makes for less confusion in the office.

Head and Scuttlebutt - The Commanding Officer of the base should consider the importance of installing a suitable Head and Scuttlebutt at the Fleet Landing as quickly as possible because otherwise the Fleet Service Office will be deluged with requests for these two facilities in particular, thus causing an overcrowded condition that will seriously hamper the effectiveness of the office.

Parking Facilities - Adequate parking facilities are very necessary. There is much traffic at the Fleet Service Office and unless proper room for parking is arranged, confusion can result. There should be regularly assigned spaces for the military bus, the NSD bus, the hospital ambulance, and the personnel jeeps of regularly attached officers of the base who make frequent visits to the Fleet Service Office. Space should also be reserved for "pool" jeeps, so that they can always be kept in an orderly fashion and therefore kept under control.

IV. TELEPHONES:

Adequate telephone service is most important. When we consider the man hours saved by having the fleet transact much of its business through the Fleet Service Office it becomes apparent that having plenty of telephones even at the expense of possibly having some other activities short of them is a good business.

V. TRANSPORTATION:

This is a very important function of the Fleet Service Office and seems to be the one that causes the most problems. There is, of course, a real need for adequate legitimate, water and vehicle transportation for the fleet. However, there are many requests for "personal joyrides" and rides that even the person making the request believes to be necessary that must be refused.

When we were discussing "organization" we mentioned that the officer in charge of the transportation desk should be alert and tactful--this is most certainly correct because it seems that everyone wants transportation, and each person thinks his case is the most worthy and that he should be served "right away". It is ofttimes necessary to have a person making a request for a jeep go by bus, double up with other jeep passengers, or in some cases, refuse him entirely. When the transportation officer can turn down a request and still have the person think the base is a good one, that officer is in the right job.

The Fleet Service Office should have a complete set of both water and bus transportation schedules for the entire island.

While the Port Director would be responsible for all boat schedules and have complete control over the boat pool, it would seem wise to have an understanding that at least one boat in the pool was for the use of the Fleet Service Office for those unusual cases when the regular water taxies won't fill the bill.

The Fleet Service Office should have several jeeps and at least two weapons carriers assigned to it, because if requests for transportation have to be relayed to the base transportation office much time is wasted. A miniature transportation office should operate from the Fleet Service Office. Drivers should be assigned to the Fleet Service Office because officers and men from the fleet usually do not have local drivers licenses, and furthermore when a driver is present, time schedules can be much better adhered to.

Busses should stop at the Fleet Service Office so that people can be kept moving with a minimum of effort.

It is also suggested that a shuttle bus between the Naval Supply Depot and the Fleet Service Office be installed so that the large number of people (working parties) desiring to make that trip can do so without tying up smaller vehicles.

VI. HOURS.

It has been our experience that while it is not necessary to keep the Fleet Service Office open 24 hours a day, that from 0700

to 2300 is advisable. A sleeping watch can carry on from 2300 to 0700.

VII. DISTRIBUTION OF MANUAL:

This is a most important function of the Fleet Service Office, because no matter how much valuable information is collected, it is not of much use, unless it is properly disseminated.

Very close cooperation with the Port Director's Office will be necessary, if the Manuals are to get proper distribution. A supply of Manuals should be on hand at the Port Director's Office at all times, so that boarding officers can deliver the Manual as they contact ships entering the harbor.

In the case of ships that report by light, they should be instructed to send a representative immediately to either the Port Director's Office or to the Fleet Service Office to draw their Manual.

The Fleet Service Office will have a list of ships present, and each day ships that have received their Manuals from either the Fleet Service Office or the Port Director's Office will be checked off, showing any non-holders of the Manual, which can be recontacted in order that all ships in the harbor will have a Manual.

Corrections to the Manual could be handled in the same manner--that is to say---a message would be sent to all ships present in the harbor requesting them to send a representative to either the Fleet Service Office or the Port Director's Office, to pick up corrections for their Manual. It would be the duty of the Fleet Service Manual Officer to follow through and check the names of the people who had drawn their changes, against the "ships present" list and again recontact any ships that had not come in.

Each Manual should bear a number, and a notation that the Manual should be returned before the ship leaves the port. A receipt should be signed for each Manual and this receipt should be returned when the Manual is turned in. In this manner it is very easy to check quickly--to know who has and who has not received a Manual. If 100 Manuals are given to the Port Director's Office

for distribution, they either have the Manuals .or the receipts. The same is true with the Fleet Service Office.

It is further suggested that the larger bases exchange Manuals. For example: Guam and Saipan send each other 50 Manuals. When a ship (DD or larger) is known to be leaving Guam or Saipan, a Saipan Fleet Service Manual would be issued to the ship, so its personnel can familiarize themselves with the services at their new port while they are underway. In such cases the Fleet Service Office at Guam would send to the Fleet Service Office at Saipan the receipt for the Manual, so that the Fleet Service Office at Saipan would not issue a second Manual, and so that they could deliver the receipt when the Manual was turned in.

VIII. FLEET SERVICE MANUALS AT NEW BASES:

It is obvious that Fleet Service Manuals cannot be published in anything like a completed form until the base is well along (probably 5 or 6 months from the time it was started). Of course simple instructions and information can be put out in the early days, but the bases should be fairly well established before a "Finished Manual" is attempted.

IX. CONCLUSION:

The Fleet Service Office at a given base can do much toward making either a good or a bad reputation for that base. The Fleet Service Office is an important part of a naval operating base. Surely it is more than an "Information Agency" if it is properly run. It is a channeling and expediting agency and in some cases an action agency.

Of course we must watch for the possibility of the Fleet Service Office becoming too cumbersome--of "the tail wagging the dog." However, this would not happen under strong supervision, so we have no real worry on that score, and after all it is usually better to have an organization that has to be harnessed than one that has to be prodded, if things worthwhile are to be accomplished.

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ANNEX J

POST-WAR ADVANCED BASE TRAINING

It is generally agreed that the experience of personnel involved in advanced base planning and training during the recent conflict indicated that advanced base activity was a step-child with, at times, nothing but nuisance value. Now this situation, while neither acceptable or pleasing to advanced base personnel, must be looked upon as being somewhat natural in a service which, until even late in the conflict, had always thought in terms of ships and ships alone. True, there were Shore Establishments but they were primarily navy yards manned principally by civilians, and to support the ships.

The development of the Central Pacific War, the "Stepping Stone War", quickly brought to attention the necessity for shore base naval activities which had to be wholly service personnel being in the exposed forward areas. The Personnel assigned to newly secured targets badly mangled in the process of being secured, had to possess training, experience, knowledge, and equipment totally unknown and unfamiliar to the sea-going personnel. Necessity therefore gave birth to a new and strange type of navy man, the "Advanced Baser", a composite individual, part sailor, soldier, and marine. He had to be indoctrinated in Navy tradition, navy phraseology, seamanship, navy communications, etc. Necessity forced him to live in, if not enjoy, pup tents, pyramidal tents, to use latrines, etc, as did soldiers. He had, in many cases, to learn to be combat troops, to live in fox holes and slit trenches, to avoid booby traps, maintain camp security, feast on "K" Rations, etc., as did the Marines. But always he had to have the"know how" of the sailor.

In order to fulfill his mission as an "advanced baser", and to live, he had to construct his camps, set-up and efficiently operate water distillation units, water purification units, cranes, fork lifts, trucks of all types, bulldozers, graders, drag-lines, ad infinitum. To live long he suddenly learned the word "Sanitation."

Flies, mosquitoes, malaria, dengue, dysentry became familiar words to this hybrid sailor-man. Some learned those things. the hard, hard way but others more fortunate , because of the vision, force, intelligence and ingenuity of a few officers, were given an opportunity to learnabout those things in several advanced base training activities.

Some of us who became pioneer "advanced basers" without training have had the opportunity to see how positively essential proper training couldbe and how much more efficiently the trained units functioned. To substantiate this we have only to consider the smoothness and efficiency with which Gropacs 6-8-9-10-11-12 and 13 have functioned compared with Gropac 1-2-3-4-5 in the Gilberts and principally in the Marshalls operations. These later Gropacs were trained in advanced base work and knew the score from the start. The pioneers learned the score on the target, but that is unsound, inefficient and definitely dangerous, and the fact that the early Gropacs functioned and survived at all must not lead responsible authorities to assume that in possible future actions untrained personnel can again be used as in the last conflict. As a naval officer, a reserve, and as a civilian, with two years of advanced base association, part in a newly secured forward area and the balance as the responsible officer for the training of many thousands, well over 40,000 of advanced base personnel, I cannot emphasize too strongly the fact that advanced base personnel must be trained prior to arrival at target.

I am only too cognizant of the fact that the American people, through its Congress, will once again decide that the United States has reached Utopia and tax-payer's pressure will result in insufficient appropriations to maintain even the surface navy. That assumption is based on the records, as I know them, and the future trend is already too well defined. The $64 question then develops - will the Navy have sufficient funds and personnel to ear-mark, equip, and train advanced base personnel for a possible World War III?

Once more I emphasize that, in view of what happened in the last conflict, advanced base personnel will be needed in any future widespread conflicts, and that it must be trained.

The ideal peace time program indicates that a limited number of navy personnel should at all times be assembled, with officers, into the varied Components, and trained in the specialties of the Components and in the general training such as Sanitation, etc, common to all advanced base units. The Advanced Base Training Program must, however, not be a step-child and must have the whole-hearted support of the Navy Department, and all navy personnel. Upon completion of the Component Training the personnel can be assigned to duty on the many bases, anchorages, etc, which are to be maintained in the Pacific Ocean Areas. Navy men and officers trained for sea duty become victims of mal-de-mer but nevertheless are good efficient navy men whose value, less the sea-sickness, is not lessened but perhaps enhanced by assignment to shore duty. It is a fact, also, that there are many young Americans who possess a liking for the Navy but because of Boy Scout training, etc, prefer camp life to ship-board life. These men in the past have joined the Army in required numbers and I have no doubt but that a considerable number of those men would enlist in the Navy for advanced base assignments.

Therefore, a limited number of navy personnel upon completion of boot training should be assigned to an "Advanced Base Training Center" which should be ideally located close to salt water where amphibious and component training can be conducted. A suitable bivouac area should also be available so that the advanced base personnel can be given as realistic field experience as possible.

Assuming that appropriations will not permit the achievement of the ideal program, it is then recommended that all navy personnel be given a reasonably thorough course in "Field Sanitation", and other general subjects, as an added period of "boot training."

Because of the possible shortage of funds and personnel there is doubt as to the Navy Department being in a position, to set up an advanced base training program, the obvious solution is to train a pre-determined part of the Post-War naval reserve in advanced base duties. It is believed that "Advanced Base Units" can well be set up in several of the Naval Districts, especially in the 9th. This would not interfere with possible plans for the training of surface units on the east and west coasts. The records will show that naval reserve units in the 9th N.D. during the pre-war period did not compare favorably with those on the coasts. This was a natural result of the fact that the 9th N.L. Reserve Divisions were not cruised on active navy deep-water ships oftener than once in four years, if that frequent. Cruises, not too effective, were held on the Lakes in inefficient, poorly equipped, craft such as the old "Sacremento", "Dubuque", and "Willemette." Because of those conditions the potential sea-going value of the 9th N.D. naval reserve was rather negative.

It is apparent, therefore, that the use of 9th N.D. post-war naval reserve for "Advanced Base Units" would not seriously interfere with the navy's possible need for trained sea-going reservists. Developing this recommendation it is suggested that a Naval Reserve Cub organization be designated for the 9th N.L. and the several Cub Components assigned to several communities, with the Administrative Component located in Chicago. The E-5 Component, for example, could be assigned to Detroit where a wealth of mechanics are available. The B4A and B7 Components located at Cleveland, Toledo, or other water-front cities. The P-3 Component located in any of the inland cities. The A-2, D-2, G-4 Components could be located at Great Lakes. The "C" Components could be located in any inland city. It is quite possible that the Cub standard organization should be tailored to include other commonly needed Components such as B-1, B-3, B-4C, etc., all of which could be easily trained on the Lakes. All hands in all components should received general training such as Sanitation, Camp Security, etc, and each summer the Cub would assemble for 14 days' active duty in a bivouac area, preferably on the water front.

Assuming that the post-war reserve will drill 1½ hours each week, a total of 75 hours of intensive training over a period of a year, plus the full 14 days active duty, plus the normal reservist's interest, would assure the nation of the availability of reasonably well trained advanced base personnel for any sudden national emergency, if required.

Plenty of equipment for assignment to such an organization is now available andin the hands of the Reserve Organizations will last indefinitely instead of feeding "rust termites" as will otherwise develop.

The Navy Department Naval Reserve Annual Inspection Boards should have in its make-up officers who have had World War II Advanced Base experience.

The Department's Training Section can easily promulgate satisfactory programs for the training of the Sub Components, publishing Training Courses in Sanitation, Distillation, Boat Repair, etc, and in view of the fact that many experienced advanced base officers will be residing in the 9th N.D. there should be no difficulty organizing Components, setting up training programs, etc. I have in mind the fact that an officer like Lieutenant Commander_____ resides in Chicago and could be interested in establishing an advanced base training program for the Reserve.